

# **The ‘Big Four’ Price Promotions In Predicting Decision Utility and Efficacy**

Steen Tjarks

Steen.tjarks.10@ucl.ac.uk



A thesis submitted for the degree of

**Doctor of Philosophy**

University College London

**Department of Clinical, Education and Health Psychology**

Prepared under the supervision of:

Dr. Dimitrios Tsivrikos and Dr. Gorkan Ahmetoglu

August 2018



# ABSTRACT

One way that retailers help the consumer make choices is via promotions – price framing methods that explicitly offer a price reduction of value for money off the regular retail price (RRP). However, there is a growing body of research that has indicated that merely the word ‘promotion’ or ‘deal’ can increase purchase intentions despite the deal offering no savings. Despite these findings, almost no research has quantifiably considered which, how and to what extent different promotional methods can bias decisions. Furthermore, very little is known about how consumers go about making promotional decisions or which psychological factors impact the decision-making process.

Considering a broad range of decision-making frameworks and psychological theories, this thesis aims to explore the extent that promotional practices influence decision-making outcomes. Furthermore, it will consider how psychological traits like financial literacy, experience and brand relationships moderate any found effects. To achieve these objectives the effect of the four most common promotional practices on decision utility will be tested in light of: the previous literature on decision-making and promotions (*Chapter 1*); expert interviews describing the traits or behaviours important in developing promotional strategies (*Chapter 2*); the effect of information processing on promotional decision making (*Chapter 3*); how prices are internalised (*Chapter 4*); and consumer relationships (*Chapter 5*). Finally, the results of each chapter will be used to create and test a framework of promotional decision-making. Creating and testing this framework in an experimental and more ecologically valid setting, i.e. a virtual supermarket will be the sole purpose of *Chapter 6*. The aim of creating and validating the framework will be to significantly contribute to: academia, by adding some novel research to the growing promotional literature; and practice, by considering how the practices specific effects to decision making can impact fair pricing practices and consumer education.

# IMPACT STATEMENT

Investigating promotional decision-making stems directly from a lack of literature on this topic; the applied insights potentially derived; and an explicit call for research to do so by both the UK government and scholars in the field. To date, promotions are moderately well addressed in the literature, but no work has yet gone about explicitly going discussing how and which specific promotional practices can bias decisions. Little is also understood about how engaging with promotions can moderate the effect of a consumer's psychology on the decision-making process. Based on these research gaps this thesis could have a significant applied and theoretical impact.

From the theoretical standpoint, the upcoming work shall provide evidence and directives for future research in the promotional literature. For many promotional practices, e.g. BOGOF the literature is still novel and has not yet considered how consumer behaviour helps to define the practice's effectiveness at increasing sales. Looking at the four most relevant and salient promotional methods consumers' encounter will help develop further research around these. More specifically, explicitly focusing on the decision outcomes of these promotions and the psychological traits that can potentially moderate these outcomes, this work will help shed light into an unexplored area of this literature. Moreover, alongside considering how these four promotions can bias or aid the fulfilment of decision goals, e.g. saving money, it will compare the extent of these effects across these practices.

By considering how a consumer's psychology moderates promotional decision-making, the upcoming work also has implications to the consumer behaviour and decision literature. For instance, the findings will help provide support for the currently proposed models of consumer decision making and even help further develop them by proposing a decision model specific to promotional contexts. Furthermore, by considering by which psychological traits aid or impede the decision process the findings will help illustrate how important consumer behaviour is to decisions primarily defined by one key decision driver – in the case of promotions, price. Since most papers consider how promotions impact consumer behaviours, rather than the other way round, this thesis will also help show how well the findings, theories and models from broader literary contexts can be applied to newer, more novel, ones.



As well as theoretical implications this thesis may have a significant impact on policy-making, education initiatives and retailer strategy. Understanding how promotional decisions are made and if specific methods can bias decision outcomes can help inform pricing policy. As will be shown in **Chapter 7** the current regulations around promotions are lax and could be significantly improved from the findings presented here. Moreover, the findings can be used to help retailers devise new promotional methods that can leverage consumer biases to increase their sales. On the other hand, by understanding how consumer behaviour impacts the decision process, it can help education officials devise initiatives to help consumers improve the critical skills needed to make well-considered, informed decisions, e.g., financial literacy.

Taken together, this thesis can have considerable implications to both theory (by extending current reach, developing new insights and providing new research directions in the promotional space) and practice (by helping retailers devise new tactful promotional practices and policy-makers improve consumer decision-making through education initiatives and developing fair pricing policies). The full text of the impact to these areas will be discussed in **Chapter 7**.

## ACKNOWLEDGEMENTS

I would like to take the time to thank a handful of amazing people who have provided me with tremendous support throughout this endeavour.

First, I would like to thank my academic mentor Adrian Furnham. You have always believed in me and given me the push I needed to succeed. Thank you for introducing me to the field, providing me with immense opportunities and taking the time to mentor me throughout my time at UCL. Your lectures and the time we spent together will always be cherished.

Second, I would like to thank my family and friends. Throughout this whole endeavour you have been my foundation, providing me with support and advice when and wherever possible.

Third, I would like to thank all my colleagues at UCL who have made this journey possible and a truly life-changing experience. Thank you, Hannah, for all the support you have given me over the last 7 years and to John who has worked behind the scenes to make this all possible. Thank you to all the UCL staff who have made the last 7 years a fantastic experience and for always pushing us to achieve excellence. Without the tremendous facilities, staff and research opportunities this really would have been a very different experience!

Finally, my biggest thank you goes to my supervisor Dimitrios Tsivrikos. The knowledge, advise, and friendship you have given me will stay with me for life. Thank you for the opportunities you have provided me over the last four years and for the fantastic life skills you have taught me. I can genuinely say it has been an honour to work with you and thank you for being an extraordinary mentor both at an academic and personal level. I would like to dedicate this thesis to you and hope it inspires you to mentor and teach others in the same way.

# CONTENTS

<b>CHAPTER 1: INTRODUCTION</b>	<b>11</b>
<b>1.1 Thesis Scope</b>	<b>11</b>
<b>1.2 Introduction to Consumer Decision-Making</b>	<b>18</b>
1.2.1 Defining Decision Utility	18
1.2.2 The Cognitive Decision Process	20
1.2.3 Cognitive Models Of Consumer Decision-Making	26
1.2.4 Quantifying Utilitarian Decision-Making	33
1.2.5 Model Evaluation and Research Gap Identification	37
<b>1.3 Introduction to Promotions</b>	<b>40</b>
1.3.1 Defining Promotions and Promotional Effectiveness	40
1.3.2 Overview of Promotional Research in The Psychological Literature	42
1.3.3 Scope of Current Research Gaps in Promotional Research	44
<b>1.4 Mechanisms Underlying Promotional Purchasing</b>	<b>46</b>
Heuristics	46
Anchoring Theory	47
Adjustment Bias	47
Prospect Theory, Mental Accounting and Sunken Costs	49
Price as a Bias	50
Promotion Length and Exposure	51
Understanding the Value/Reward of Promotions	51
Consumer Psychology in Driving Promotional Effectiveness	52
<b>1.5 The ‘Big Four’ Promotional Practices</b>	<b>57</b>
1.5.1 The word ‘free’ and BOGOF/BOGDIF variants	57
1.5.2 Drip Pricing	60
1.5.3 Value-Based Pricing	65
1.5.4 Bundling Practices	71
<b>1.6 General Conclusions, Directions and Scope</b>	<b>75</b>
1.6.1 Promotion-Based Conclusions	75
1.6.2 Research Gaps and Directions	76
<b>CHAPTER 2 – CONSUMER PSYCHOLOGY AND DECISION MAKING</b>	<b>81</b>
<b>2.1 Overview</b>	<b>81</b>
<b>2.2 Introduction</b>	<b>82</b>
<b>2.3 Literature Review</b>	<b>85</b>
2.3.1 Demographics	85
2.3.2 Personality	88
2.3.3 Information Processing	90
2.3.4 Price Internalisation and Decision-Making	92
2.3.5 Brand Relationships & Decision-Making	93
2.3.6 Interview Aims and Hypotheses	95
<b>2.4 Methodology</b>	<b>96</b>
2.4.1 Participants	96
2.4.2 Design	97
2.4.3 Data Collection and Procedure	97
<b>2.5 Thematic Analysis</b>	<b>99</b>
<b>2.5.1 Consumer Factors Influencing Promotional Decision-Making</b>	<b>99</b>
Trait-Based Factors - Demographics	99
Trait-Based Factors – Personality	102
Trait-Based Factors - Empowering Traits	104
<b>2.5.2 Behavioural Factors</b>	<b>105</b>
Stimuli Processing	105

<i>Behavioural Factors - Price Expectations</i> .....	106
<i>Behavioural Factors – Brand Relationships</i> .....	108
<i>Behavioural Factors – Purchase Intent</i> .....	109
<b>2.5.3 Retail/Environmental Factors Influencing Promotional Decision-Making</b> .....	<b>111</b>
<b>2.5.4 Factor importance in determining decision outcomes for promotions</b> .....	<b>113</b>
<b>2.6 Discussion</b> .....	<b>119</b>
<b>CHAPTER 3 – DUAL PROCESS MODELS ON PROMOTIONAL DECISION UTILITY</b>	<b>123</b>
<b>3.1 Chapter Overview</b> .....	<b>123</b>
<b>3.2 General Introduction</b> .....	<b>124</b>
<b>3.3 Literature Review</b> .....	<b>125</b>
3.3.1 <i>Need for Cognition</i> .....	126
3.3.2 <i>Faith in Intuition</i> .....	127
3.3.3 <i>Experience and Financial Literacy as Empowering Traits</i> .....	128
3.3.4 <i>NFC and FII in promotional contexts</i> .....	130
3.3.5 <i>Study aims and hypotheses</i> .....	131
<b>3.4 Method</b> .....	<b>131</b>
3.4.1 <i>Participants</i> .....	131
3.4.2 <i>Design and Apparatus</i> .....	132
3.4.3 <i>Procedure</i> .....	134
<b>3.5 Results</b> .....	<b>134</b>
<b>3.6 Discussion</b> .....	<b>139</b>
3.6.1 <i>Evaluation of results</i> .....	139
3.6.2 <i>Methodological Limitations</i> .....	142
3.6.3 <i>Implications and Applications</i> .....	142
3.6.4 <i>Conclusion</i> .....	143
<b>CHAPTER 4 – IRPS AND PROMOTIONS ON DECISION UTILITY</b>	<b>145</b>
<b>4.1 Chapter Overview</b> .....	<b>145</b>
<b>4.2 General Introduction</b> .....	<b>147</b>
<b>4.3 Literature Review</b> .....	<b>148</b>
4.3.1 <i>The Fundamental Theories in the IRP Literature</i> .....	148
4.3.2 <i>Literature on IRP Formation</i> .....	149
4.3.4 <i>IRP Malleability</i> .....	150
4.3.5 <i>Promotions and Processing Methods with IRP Malleability</i> .....	151
4.3.6 <i>Overall Aims and Hypotheses</i> .....	154
<b>4.4 Study One</b> .....	<b>155</b>
4.4.1 <i>Study One Aims and Hypotheses</i> .....	155
<b>4.5 Method</b> .....	<b>155</b>
4.5.1 <i>Participants</i> .....	155
4.5.1 <i>Design/Materials</i> .....	156
4.5.3 <i>Procedure</i> .....	157
<b>4.6 Results</b> .....	<b>158</b>
<b>4.7 Discussion</b> .....	<b>164</b>
4.7a <i>Evaluation of results</i> .....	164
<b>4.8 Study Two</b> .....	<b>167</b>
4.8.1 <i>Aims and Hypotheses</i> .....	167
<b>4.9 Method</b> .....	<b>167</b>
4.9.1 <i>Participants</i> .....	167
4.9.2 <i>Design/Materials</i> .....	168
4.9.3 <i>Procedure</i> .....	169
<b>4.10 Results</b> .....	<b>169</b>

<b>4.11 Discussion</b> .....	<b>175</b>
4.11.1 <i>Evaluation of results</i> .....	175
<b>4.12 General Discussion</b> .....	<b>177</b>
<b>Chapter 5 – Brand Relationships on Promotional Decision Utility</b> .....	<b>183</b>
<b>5.1 Chapter Overview</b> .....	<b>183</b>
<b>5.2 General Introduction</b> .....	<b>186</b>
<b>5.3 Literature Review</b> .....	<b>187</b>
5.3.1 <i>Brand Relationships</i> .....	187
5.3.2 <i>Promotions and Brand Relationships</i> .....	191
5.3.3 <i>Other moderators of in-store decision utility</i> .....	192
5.3.4 <i>General aims and hypotheses</i> .....	194
<b>5.4 Study One</b> .....	<b>195</b>
5.4.1 <i>Aims and Hypotheses</i> .....	195
<b>5.5 Method</b> .....	<b>195</b>
5.5.1 <i>Participants</i> .....	195
5.5.2 <i>Design/Materials</i> .....	196
5.5.3 <i>Procedure</i> .....	198
<b>5.6 Results</b> .....	<b>199</b>
<b>5.7 Discussion</b> .....	<b>204</b>
5.7.1 <i>Evaluation of results</i> .....	204
<b>5.8 Study Two</b> .....	<b>207</b>
5.8.1 <i>Aims and Hypotheses</i> .....	207
<b>5.9 Method</b> .....	<b>208</b>
5.9.1 <i>Participants</i> .....	208
5.9.2 <i>Design/Materials</i> .....	209
5.9.3 <i>Procedure</i> .....	210
<b>5.10 Results</b> .....	<b>211</b>
<b>5.11 Discussion</b> .....	<b>216</b>
5.11.1 <i>Evaluation of results</i> .....	216
<b>5.12 General Discussion</b> .....	<b>218</b>
5.12.1 <i>Summary and evaluation of findings</i> .....	218
5.12.2 <i>Methodological limitations and future research</i> .....	220
<b>CHAPTER 6 – MODEL TESTING IN A VIRTUAL SUPERMARKET</b> .....	<b>225</b>
<b>6.1 Chapter Overview</b> .....	<b>225</b>
<b>6.2 Introduction</b> .....	<b>226</b>
6.2.1 <i>The Importance of Demographics and Personality</i> .....	226
6.2.2 <i>The Importance Of FII, NFC And Decision Competence Factors</i> .....	227
6.2.3 <i>The importance of the price internalisation process</i> .....	228
6.2.4 <i>The importance of brand relationships</i> .....	230
6.2.5 <i>The importance of promotional practices on decision utility</i> .....	230
6.2.6 <i>Aims and hypotheses</i> .....	231
<b>6.3 Method</b> .....	<b>235</b>
6.3.1 <i>Participants</i> .....	235
6.3.2 <i>Design/Measures</i> .....	235
6.3.3 <i>Procedure</i> .....	239
<b>6.5 Results</b> .....	<b>239</b>
6.5.1 <i>Assessing Decision Utility</i> .....	239
6.5.2 <i>Preliminary Results</i> .....	241
6.5.3 <i>Model Testing</i> .....	244
<b>6.6 Discussion</b> .....	<b>262</b>

6.6.1 <i>The Proposed Model</i> .....	262
6.6.2 <i>Hypothesis Validation</i> .....	264
6.6.3 <i>Promotion-specific Effects</i> .....	268
6.6.4 <i>Limitations, Future Work, Implications and Conclusions</i> .....	269
<b>CHAPTER 7 – THESIS DISCUSSION AND CONCLUSIONS</b>	<b>275</b>
<b>7.1 Theoretical and Applied Thesis Originality</b> .....	<b>277</b>
7.1.1 <i>Originality to the Promotional/Pricing Literature</i> .....	277
7.1.2 <i>Originality to the Consumer Decision Literature</i> .....	281
7.1.3 <i>Originality to the Consumer Psychology Literature</i> .....	283
<b>7.2 Theoretical Implications of Findings</b> .....	<b>284</b>
7.2.1 <i>Decision-Making Literature</i> .....	284
7.2.2 <i>Consumer Behaviour</i> .....	288
7.2.3 <i>Pricing and Promotion Literature</i> .....	296
<b>7.3 Limitations of the Study/Investigation</b> .....	<b>301</b>
7.3.1 <i>Theoretical Limitations</i> .....	301
7.3.2 <i>Methodological Limitations</i> .....	304
<b>7.4 Future Research</b> .....	<b>306</b>
7.4.1 <i>Direct Extensions of the Study</i> .....	306
7.4.2 <i>Broader Issues to be Covered in Future Work</i> .....	309
<b>7.5 Practical Implications of the Research</b> .....	<b>315</b>
<b>7.6 Conclusion</b> .....	<b>318</b>
<b>REFERENCES</b>	<b>321</b>
<b>APPENDIX</b>	<b>383</b>

# CHAPTER 1: INTRODUCTION

## 1.1 Thesis Scope

Every day millions of purchases are made across the globe. When making these purchases, consumers have to make a number of decisions that should help them fulfil their purchasing goals. One goal may be to save money, another to buy the best quality product. The research field that investigates how consumers make decisions is aptly known as consumer decision-making. Although the decision process is vital to understanding consumer behaviour, there are many other research streams under the umbrella of this topic. One stream looks at the importance of a consumer's psychology in helping to define purchasing behaviours. Some of the psychological traits explored include: personality; cognition (i.e. how consumers processes, engage with and evaluate information); brand relationships; goal orientation (i.e. how a purchase goal is realised and fulfilled) and many more.

Understanding consumer psychology in its entirety involves understanding the relationship consumers have with prices. Within the consumer literature, some studies find that price is often the most crucial deciding factor in decisions. Moreover, price is crucial in defining how consumers engage with promotions as promotions are price frames that either offer, e.g. 50% off of value for money, e.g. buy one get one free. However, although promotions are used on a daily basis by retailers and so experience equally as frequently by consumers, very little empirical work has looked at how promotions affect consumer behaviour. The promotional research that does exist primarily focuses on what factors predict promotional effectiveness (i.e. the sales derived from the promotions) rather than the role of a consumer's psychology in regular purchasing (e.g. consumer cognition or brand relationships influence promotional purchasing). Moreover, there is no work directly considering how promotions or specific promotional methods impact decision outcomes. This is surprising as some novel findings suggest that many promotions can lead consumers to accept higher total prices because they are in a promoted format (Arora, 2008).

In light of this research gap, this thesis will endeavour to address this research gap by using two components of the previous literature. First, it will use the theoretical models and theories from the wider literature to assess how promotions impact decision utility. Second, to investigate how a consumer's psychology impacts promotional decisions the findings from the broader consumer

behaviour literature need to be tested in a promotional context. Using a decision lens the findings in the upcoming chapters will highlight how consumers process, engage and evaluate retail price promotions. The impact of the decision process on decision utility shall be discussed, the practices prone to invoking more decision bias highlighted, and the psychological moderators of promotional decision explored. To give some extra context about the areas being researched the following paragraphs will highlight the critical areas in the decision, consumer and promotional literature relevant to this topic. It will also present a breakdown of the chapters to come and provide a rationale of the directions taken. Figure 1 provides a breakdown of the theoretical and applied goals that this thesis seeks to research.



# Thesis Structure

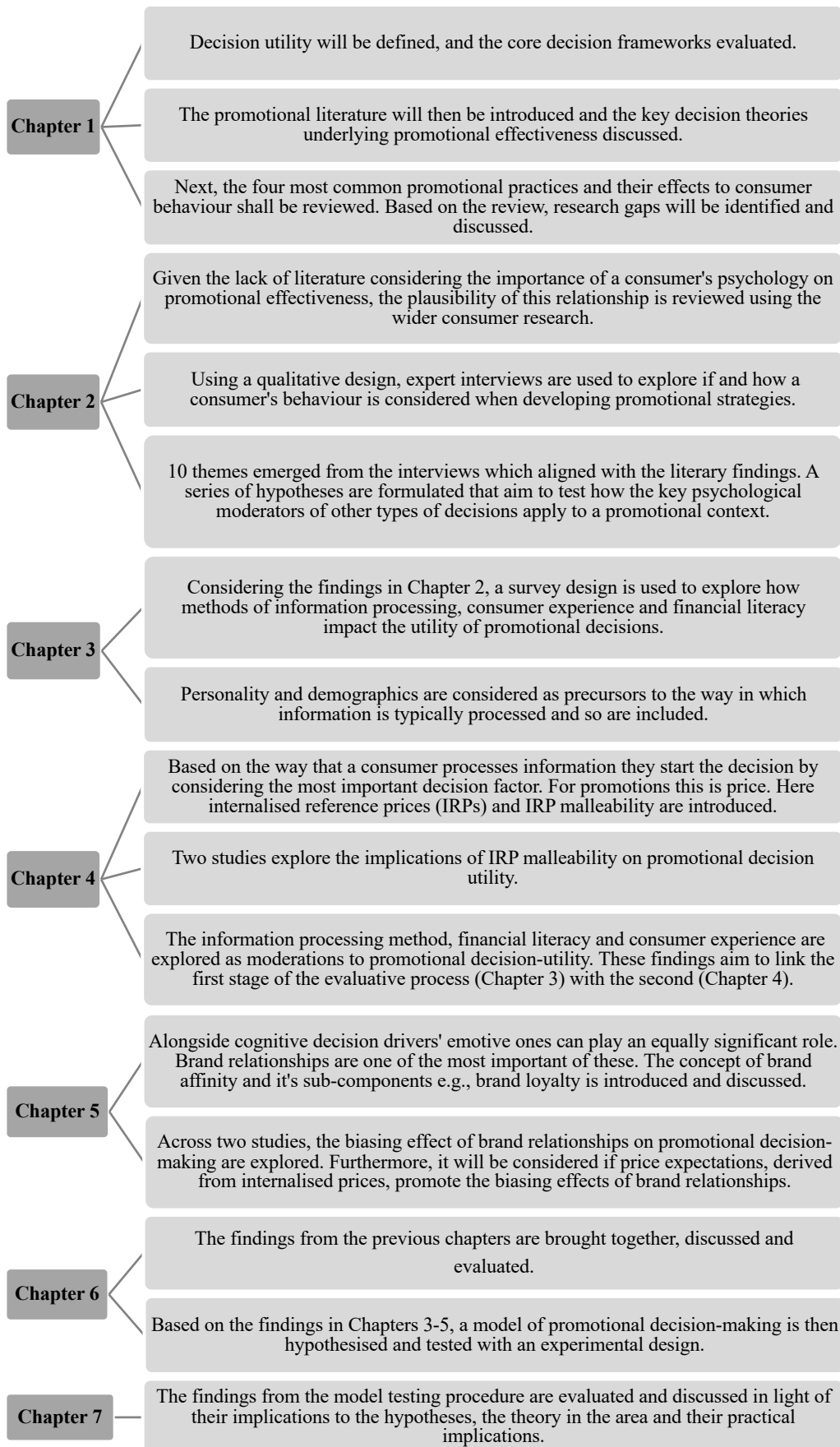


Figure 1. Description of each of the upcoming chapters and how they interlink into the overall theme of decision making in promotional contexts.

The **first chapter** starts by providing an overview of the central theories, concepts and terms that comprise the decision-making literature. First, 'good' decision-making will be defined in the context of promotions, and the existing decision frameworks in the consumer literature will be extensively evaluated. From this evaluation, Kahneman and Tversky's (1982) econometric formula of decision utility is introduced, and Einhorn and Hogarth's (1981) three-step decision evaluation model described. Both will be a vital tool in assessing how 'good' or 'utilitarian' a decision is in light of the most critical decision factors to a consumer.

The chapter then introduces promotions and provides a brief overview of the key theories underlying promotional effectiveness, i.e. how good a promotion is at driving sales, from a retailer and consumer perspective. Based on this definition, the decision literature suggests that there are many consumer biases which are vitally important to understanding how promotions function and why they are so compelling. The current research linking consumer behaviour with promotions will then be discussed, and a rationale presented that proposes that promotions can negatively impact decision outcomes. Based on the research supporting this premise, four of the most commonly used promotional practices are reviewed in light of their documented effects on consumer behaviour and decision utility. These promotions, named by this thesis as the 'Big Four'<sup>1</sup>. After a review of each, some research gaps are identified, and the first aims of this thesis presented.

The **second chapter** will start to address the central research gap identified in **Chapter 1** – the lack of research considering how a consumer's psychology impacts promotional purchasing. First, the importance of psychological factors, including gender, age, social class, parenthood and consumer experience, on general decision-making competence will be discussed. Some of the critical theories linking consumer and decision psychology with promotional purchasing will then be introduced, e.g., the cogno-affective theory of promotional decision making (Laroche, Pons, Zgolli, Cervellon and Kim, 2003). These theories will serve as a good starting point to understand how the findings from the general consumer and decision literature could transfer across to a promotional context. To gain an even deeper understanding of the relationship between promotional decision-making and psychology, a qualitative research design and thematic analysis will be undertaken. 20 pricing experts are interviewed to explore

---

<sup>1</sup> The 'Big Four': Buy one get something different free' (BOGDIF); Drip pricing (incremental price increase via 'add-ons'); Value-Based pricing (whereby the value of the product compared to price is clearly indicated) and Bundling (whereby similar products are grouped).

how consumer behaviour can inform promotional effectiveness. Since the promotional topic is as much applied as it is theoretical understanding the topic in depth requires using a cohort knowledgeable of both. In light of this, qualitative data was obtained from; academics, who provided theoretical perspectives on the topic; pricing consultants, who provided retail-driven field insights; and marketing executives, who provided typological and big-data driven perspectives on promotional behaviour. From the data, ten key themes were extracted. Each theme will be discussed in light of their implications to promotional decision-making and how that theme could potentially bias decisions alongside promotions. The themes will also be used to create testable hypotheses for the subsequent chapters to test.

The **third chapter** begins to consider one of the most critical cognitive aspects driving a decision – the method by which information is processed (Einhorn and Hogarth, 1981; Laroche *et al.*, 2003). This chapter will test how the two methods of information processing (intuition and/or cognition) can determine promotional decision utility. In the classical literature (i.e., pre-1990), cognitive information processing was thought to improve decision efficacy and utility while intuition degraded it. However, research suggests that the best decision-makers have a combination of financial literacy and experience that prompts them to use either intuition or cognition to suit the purchase context (Frederiks, Stenner and Hobman, 2015). When consumers are inexperienced or financially illiterate, cognition is used. The opposite is true for intuition. Using a sample of working adults, this Chapter will highlight how cognitive and intuitively based reasoning influences decision utility when ‘monetary value’ is set as the primary decision driver for each of the ‘Big Four’ promotions. It will also be the first investigation in this thesis to compare the effect of each promotional practice on decision utility.

The **fourth chapter** considers a secondary cognitive component of purchase decisions - the evaluation of the most crucial decision drivers (Einhorn and Hogarth, 1981; Laroche *et al.*, 2003). In promotional contexts, the price is irrevocably considered the most critical of these. However, to successfully evaluate price fairness, consumers often retrieve past prices paid from memory. The literature names these memory-based prices as internal reference prices (IRPs) as they act as reference points for later price evaluations. However, IRPs are often considered as being highly malleable and so if falsely internalised bias price evaluations (Mazumdar, Raj and Sinha, 2005). This chapter will start to consider if promotional practices can impact price internalisations and what implications this has for decision-making. It will also consider if information processing methods can aid or abed any found

effects, thereby linking the findings from **Chapter 3** with these. Using a sample of working adults and students, *study one* assesses the extent to which the ‘Big Four’ can promote IRP malleability. It also considers how a falsely internalised price can then bias a promotional decision. *Study two* attempts to reconfirm the malleability effects found in the first, while also considering how a consumer’s preferred method of information processing can moderate any effects. It will test whether intuitive reasoning decreases any decision bias associated with IRP malleability or increased by cognitive reasoning. Once again, both studies aim to explore which promotional practices bias decisions the most and how cognitive aspects of a decision influence the decision outcome.

The **fifth chapter** will start to consider the influence of non-cognitive behaviours on promotional decision-making. For instance, according to the cogno-affective theory, there is a robust affective dimension that governs promotional purchasing (Laroche *et al.*, 2003). Of the affective dimensions, this chapter will focus on one of the most well researched - brand relationships which typically comprises of brand loyalty, the likelihood of switching and brand identification. First, the literature and theories surrounding brand relationships and their effect on decision-making will be discussed. For instance, according to the consumer literature, brand relationships are shown to be powerful decision drivers that can leave consumers unusually open to bias (Lin and Sung, 2014). Since little work has considered the effect of brand relationships in a promotional context, two studies will investigate how brand relationships influence decision bias in the context of the ‘Big Four’. Using a sample of working adults, *study one* firstly considers if characteristics of brand relationships factor into one dimension that could be called ‘brand affinity’. It considers how brand switching, identification and loyalty are factors in this dimension and whether this can influence decision utility across the promotional methods. *Study two* aims to revalidate the findings of the first, also considering how internalised price expectations influence the effect of brand relationships on decision-making. The objective of these studies is, twofold. First, they both aim to reconfirm the individual effect of promotional practices on decision utility. Second, they aim to test if brand relationships can influence promotional decisions and if they interact with cognitive decision components to do so, thereby supporting the cogno-affective theory.

Finally, based on the findings from the preceding chapters a hypothetical model of promotional decision making will be proposed. **The sixth chapter** tests the validity of this model in a more ecologically valid setting, namely a virtual supermarket. Using a sample of working adults and a

rigorous experimental design, participants will navigate the virtual purchase environment with a fixed purchase task. Employing a complex between-subjects design, this chapter aims to test both the direct and indirect effects of demography, personality, information processing, price internalisation and brand relationships on the utility of the purchases made. This will be calculated using a modified version of Kahneman and Tversky's (1982) formula of decision utility (see page 33) and shall be defined by the assigned importance of each participant's decision factors. Using structural equation modelling, the decision model for promotional practice will be tested. Each model shall provide an insight into which aspects of consumer behaviour particularly bias promotion-based decisions. Fulfilling these objectives will have significant implications for the promotional, decision and consumer literature, where significant research gaps offer little information into how promotions affect decisions. The applied implications will also be discussed.

Researching a topic as broad as promotions is no easy feat and will require the deployment of many research methods. Using a mix of qualitative, quantitative and experimental research designs, this thesis aims to fulfil its research aims. For example, **Chapter 2** utilises a qualitative approach to understand how promotions are created in practice, and the factors considered. This method is significant in complimenting the review of consumer behaviour undertaken in **Chapter 2**, something quantitative research alone would not be able to achieve. In contrast, to test the specific relationships hypothesised at the end of **Chapter 2** other research methods are required. Therefore, **Chapters 3-5** use an online survey to quantifiably test the influence of a number of psychological traits and behaviours on promotional purchase intentions across different purchase scenarios. However, since online surveys lack ecological validity in real-world purchase contexts, a more fitting approach is needed to test the overall model. To mimic real-life purchasing without the use of a real shop, an experimental approach was deemed the most appropriate. Using a virtual supermarket provided an ecologically valid platform to assess how promotional decisions are made in a scenario where hundreds of other stimuli are present. Taken together, the use of a variety of methods proved very useful in helping to define the model tested in **Chapter 6**.

## 1.2 Introduction to Consumer Decision-Making

### 1.2.1 Defining Decision Utility

In the 1950s, Milton Friedman argued that when individuals make decisions they try to balance costs against benefits in order to fulfil their decision objectives (Friedman, 1953). His theory, later known as the rational choice theory, became a fundamental aspect of traditional economics and describes decision agents by the quality or state of being *rational*. The rational choice theory implies the alignment of one's beliefs with one's reasons to believe, and of one's actions with one's reasons for action (Coleman and Fararo, 1992). Put simply, rationality is defined by the ability to make the best possible choice based on one's goals.

To determine which action is the most rational the decision maker needs to make several critical assumptions about the problem structure, i.e. the components and evaluative steps needed in a decision. Each assumption depends on the recipient of the action, which can either be the individual or a group. Interestingly, most assumptions that are made surround the goal and desired outcome of the action, which traditional economics theorists believe is well understood by the decision agent (Riquelme, 2001). These goals can be anything from deciding the perfect meal to cook to the way one writes a covering letter. Since these assumptions vary contextually so too does rationality. For example, if a model in which benefiting oneself is rational, then rationality is equated with behaviour that is self-interested and egotistical. In contrast, if a model in which benefiting the group is rational, then self-centred behaviour is deemed irrational. It is thus meaningless to assert rationality without also specifying the background assumptions that describe how the problem is framed and formulated. In a consumer context, rational decisions have been described as those that offer the consumer the greatest reward, also known as utility (Doyle, 1999; Simon, 1959).

One of the fundamental issues with the rational choice theory is that it stipulates that consumers can ignore their behavioural predispositions (e.g., personality) when making choices. Contemporary research disputes this by consistently finding that a consumer's psychology impacts decision outcomes (Hausman, 2000; Tversky and Kahneman, 1991). For instance, there is ample work to show that brand specific pre-conceptions (e.g., I have heard that brand is bad quality) and emotive reasons for purchasing (e.g. brand loyalty) are significant determinants of decisions (Veloutsou, 2015). Moreover, when the goal or problem involves making a decision, rationality theorists state that the decision maker must factor in all information available, complete or

incomplete. This requires consumers to assess all available options, attributes and retailers when making a choice. As this is both unreasonable and impractical, consumers are irrefutably described as being confined by the most salient information available to them. Some of this information may stem from external sources, e.g. messages from recent advertisements and promotional information or internal sources, e.g. satisfaction from recent purchases.

In light of the issues underpinning the rational choice theory, the theory of 'bounded rationality' was proposed (Simon, 1991). In his seminal work, Simon argues that decision agents experience limits in solving complex problems and in processing (receiving, storing, retrieving, transmitting) information. Consequentially, his theory suggests that when individuals make decisions their rationality is limited by three key factors. Namely, the flexibility of the decision problem, the agent's cognitive limitations, and the time available to make the decision. Because of these limitations, Simon (1991) suggests that decision agents use intuition and past experience to guide actions rather than rely on strict rules of optimisation. They do this because of the complexity of the situation, and their inability to process and compute the expected reward of every alternative action. The cognitive cost of evaluating options might also be high, and there are often other concurrent decisions to be made in any one decision. Simon (1991) therefore proposes that rather than being 'optimal' or rational, decision-makers act as satisfiers who try to seek a satisfactory solution.

Based on the theory of bounded rationality, satisfactory decisions in consumer contexts can be defined by obtaining utilitarian decision outcomes that meet the purchasing goals of the consumer. These goals could be as simple as getting the best t-shirt for the lowest price or feeding the family with a healthy meal. However, in every decision consumers' are assumed to place an importance on the product's attributes, such as price or quality, on which they base their decisions. For most fast-moving consumer goods (FMCG), which includes nondurable items such as food, beverages and over-the-counter drugs, there are generally five attributes of importance: price, quality, health, brand and taste. While sub-attributes, such as fat or sugar content, may have additional importance, the extent to which consumers consider these consistently is found to be negligible (Krystallis, Maglaras, and Mamalis, 2008). Measuring 'good' decision-making based on these factors is therefore critically dependent on the accuracy with which the consumer communicates their preferences to the researcher. Given that utility is entirely defined by the consumer, understanding and defining a utilitarian purchase decision relies on being able to understand each consumer's purchase goals.

With research identifying that consumers rarely know their preferences, thereby offering no consistent purchasing method or goal, measuring consumer decision utility usually requires a control factor (Alba and Hutchinson, 2000). In many cases, especially promotional ones, the factor of particular interest is price, as it is of primary importance for both consumers and researchers (Ahmetoglu, Furnham and Fagan, 2014). Therefore, in promotional studies like those forthcoming, 'satisfactory' or utilitarian decisions are those that provide the greatest amount of 'savings' or value for money (VFM). In a research context, such a decision could be referred to as an economically utilitarian decision (EUD).

### **1.2.2 The Cognitive Decision Process**

The theories of reasoned action (Fishbein and Ajzen, 1967) and planned behaviour (Ajzen, 1991) are often used as a framework for the analysis of consumer decision making. These predictive approaches contrast analytical approaches such as the "EKB" model (Engel, Kollat, and Blackwell, 1973), which describes the stages of the decision-making process itself.

The theory of reasoned action (TRA), first proposed by Fishbein and Ajzen (1967), seeks to understand an individual's voluntary behaviour to perform an action or undertake a decision given three factors; attitudes, subjective norms and motivations. According to the theory, if people evaluate the suggested behaviour as positive (attitude), and think others want them to perform the behaviour (subjective norm), then there is a higher intention (motivation) to perform the behaviour. Fishbein and Ajzen (1967) also suggests that a person's intention to perform a behaviour is the primary predictor of whether or not they actually will. Performing a behaviour is preceded by the intention to perform it, which due to the decision agent's wish to remain congruent with their intentions means that the behaviour is then likely to be undertaken. For example, it was found that when a homeowner expressed intent to allow a sales company to place a billboard outside their house, they were far more likely to allow it to happen two weeks later (Asch, 1958). Replications of this classic study have found identical findings wherein intent to perform a behaviour, even if of no benefit to the participant, resulted in behaviour (e.g., see Bond and Smith, 1996).

Since a high correlation between intention and behaviour was observed in many classical studies, support for this approach was initially strong (e.g. see Bond and Smith, 1996; Hodges and Geyer, 2006). However, there are now a vast number of critics who reject the TRA because many



studies indicate that intention does not predict behaviour. In fact, the results of some studies show that because of circumstantial limitations, behavioural intention rarely ever leads to actual behaviour (Sheeran, 2002; Sutton, 1998). For instance, Ouellette and Wood (1998) suggest that intention cannot be the exclusive determinant of behaviour where an individual's control over the behaviour is uncertain. Critics, therefore, suggest that the TRA lacks consideration of the ability to undertake the behaviour given the context. In light of this criticism, a second analytical approach has emerged.

The theory of planned behaviour (TPB – Ajzen, 1985) was proposed as an extension to the TRA by incorporating a fourth factor, perceived behavioural control. Behavioural control is defined as the degree to which a person believes that they control any given behaviour and is described as a mix of two dimensions: self-efficacy and controllability. Self-efficacy indicates the level of difficulty that is required to perform the behaviour, while controllability refers to one's belief that there is control over one's performance of the behaviour. If a person has high perceived behavioural control, then they have increased confidence that they are capable of performing the specific behaviour successfully. According to the literature, the addition of this behavioural control dimension overcomes the previous criticisms whereby intentions that are easy to carry out are far more likely to be undertaken. Applied to a consumer context the TBP would suggest that attitudes (“I like getting a discount”) combine with societal norms (“promotions offer everyone value”) to motivate and rationalise a purchase. Vaidyanathan, Aggarwal, Stem, Muehling and Umesh (2000) show that the stereotypical attitude towards a promotion is to purchase to obtain ‘good value for money’. This attitude combines with the social norm telling us that promotions are the best way to get value and so, in turn, the action of purchasing is considered reasonable.

Despite having been applied successfully to many decision contexts, the TPB is not without criticism (e.g., Sniehotta, Pesseau and Araújo-Soares, 2014). In response to earlier objections, Ajzen (2015, pg. 2) still acknowledges the significant problems inherent in predicting behaviour from intent. Day, Gan, Gendall, and Esslemont (1991) support Ajzen’s sentiments by demonstrating the low conversion rates between intentions to buy and actual purchasing. Moreover, in consumer context the TPB is further criticised as there is a considerable debate surrounding the extent purchasing is truly planned (Chandon, Morwitz and Reinartz, 2005; Madhavaram and Laverie, 2004). While some purchasing is inevitably planned and thus intentional, this may be more a result of decision involvement (how engaged and intricate a decision is), rather than being truly planned. For example,

research finds that for routine purchases such as buying groceries, there is ample work to show that despite planning what to buy with a shopping list many consumers switch choices at the point of sale (POS). Thus, there is often an unplanned, impulsive element to many intentional routine purchases, whether it is switching brands or adding extra items to the shopping basket. This somewhat impromptu fashion of purchasing is particularly important as both the TRA and TPB are directed toward intentional purchasing. In promotional contexts, this is particularly noteworthy as some novel research estimates that over half of promotional purchases are unplanned (Bell, Corsten and Knox, 2011). Therefore, promotional purchasing may not be well described by these models but better suited to an analytical approach. The acknowledged gap between intent and action further indicates that an analytical rather than a predictive approach is more appropriate when considering consumer decisions.

The EKB model (Engel, Kollat and Blackwell, 1973) is one of the most well-regarded of the analytical approaches. The model sets out a five-stage buying process that consists of recognising the need to purchase; conducting an information search about where, what and when to buy; an appraisal stage where options are evaluated; the final purchase decision; and post-purchase behaviour that determines whether a purchase will be repeated. According to this model, consumers must first choose and identify a goal, move on to searching for the consideration set (the range of products to choose from), before finally making a choice. See Figure 2., for a breakdown of each stage.

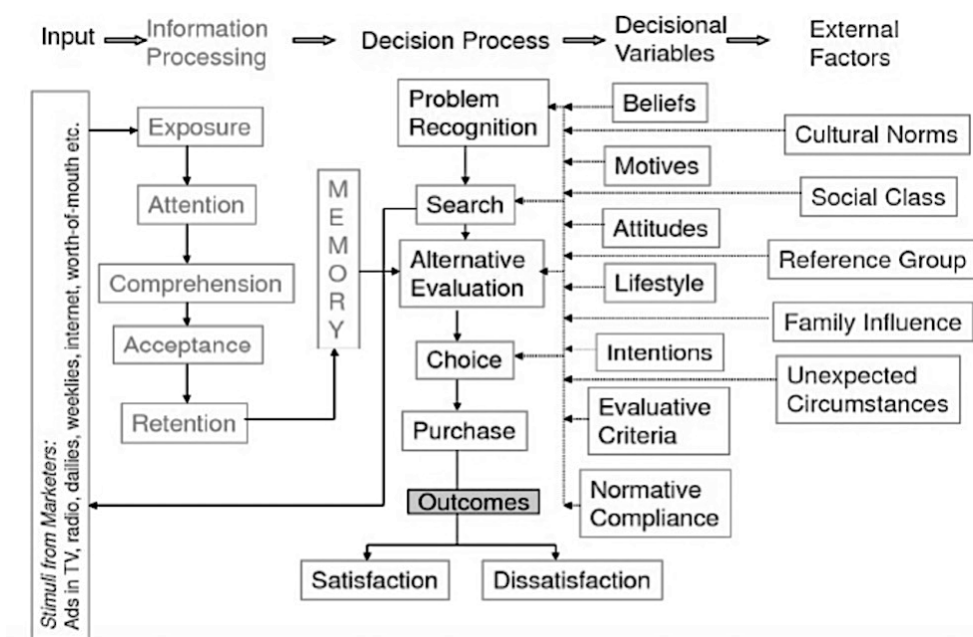


Figure 2. The five-stage decision model (EKB) as suggested by Engel, Kollat, and Blackwell (1973)

This sequence of actions has been consistently validated by the literature and has even been developed to combine elements of the TPB. For instance, Sinah (1994) found evidence to support a model of purchase choice consisting of multiple actions (see Figure 3). Not only does this model support the five-step process proposed by the EKB but it further shows the importance of the individual, situational and brand factors in influencing the evaluative phases of the consideration set.

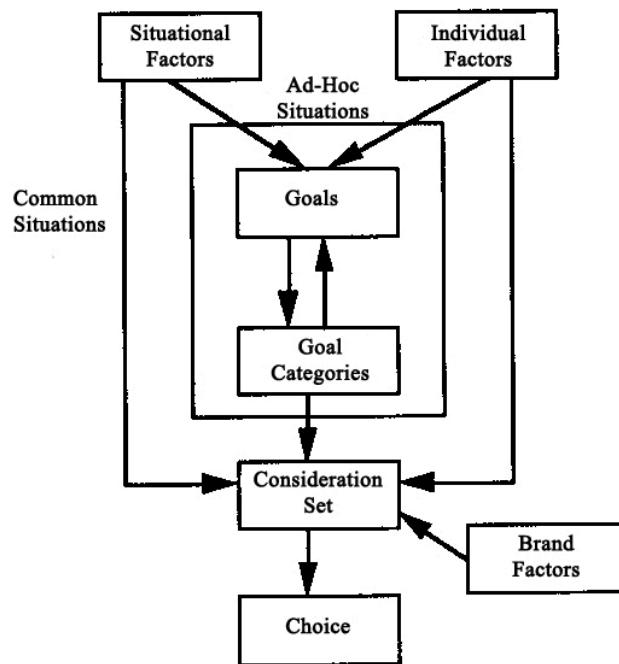


Figure 3. A conceptual model of the consumer decision process that considers the theory of planned behaviour, proposed by Sinah (1994).

According to the EKB and Sinah’s (1994) combined approach, the first decision stage involves the consumer identifying a shortfall between their actual and desired states (Blackwell, Miniard and Engel, 2001). This could arise as a physiological/functional state (“ I am thirsty, I need a drink”), or as a psychological state (“ I am bored, I will go shopping”) (Solomon, Bamossy, Askegaard, and Hogg, 2006). In the literature, an assessment of rationality is not relevant for physiological needs such as hunger and thirst as the need must be fulfilled to satisfy our basic functioning. Functional needs, on the other hand, are created through reasoning, e.g. a dishwasher has worn out and needs replacing, and so have the potential to be more biased than physiological needs. For example, the assessment of whether, say, a laptop needs replacing may be down to a variety of factors such as processing speed or memory, that may be misinterpreted in the reasoning process.

In searching for ways to satisfy their identified needs, consumers may use external or internal information sources. External sources, such as websites offer a wide array of information but can be skewed and unreliable while internal sources, including previous experience and past prices paid, can be reliable but depend on the accurate internalisation of the information. In essence, the extent to which an information search is undertaken depends on the level of prior knowledge and the time allowed for the search process (Keller and Kotler, 2016). In principle, the information search should be goal-specific and reason-based, although in practice the opinions of social groups and individuals significantly influence external searches. Research finds that even though a consumer may find the best price online via a price comparison site, they place a higher weight on social recommendations (Bearden and Etzel, 1982). The EKB model does account for this issue and sets out the critical mental processes involved in external searches. It accepts that the searches are subject to influence via marketing and that they are not perfectly efficient (Blackwell *et al.*, 2001). On balance, therefore, the information search phase can be seen as accurate concerning its intent, although perhaps flawed in its execution. Again, since information searching is time and knowledge dependent, it could be argued that for impulsive regular purchases, e.g. grocery promotions, this stage of the process is circumvented.

In sum, the need recognition and information search stages described in the EKB model have the potential to be omitted by consumers during impulsive promotional purchasing. If so, then the success of these spontaneous decisions relies on the consumer being able to make a successful and comprehensive evaluation of the options available. While it is true that promotions are often advertised, thus offering an opportunity for goal-orientation and information searching to take place, research shows that this is dependent on the promotion and product type.

It has been suggested that the need recognition and information search phases vary by promotion type and are more prevalent for promotions that require physical redemption, such as coupons. For this type of promotion, it can be assumed that the effort associated with redemption may stimulate searching behaviours to assess if it is beneficial. There is also research to suggest that because consumers have the resources and time to conduct an information search for online promotions, they do so (Van der Heijden, Verhagen and Creemers, 2003). This contrasts with in-store purchases where consumers are often time-limited and attracted to the idea of being able to obtain value for money without effort or delay. In essence, some research suggests that because in-store

promotions offer immediate gratification, the need recognition and information search stages are bypassed (Huang and Kuo, 2012). The later parts of **Chapter 1** will discuss these types of promotions in more detail.

Research also finds that product type influences the decision process - with consumers engaging in all five decision stages for more expensive product promotions like TVs. For such products, consumers tend to recognise a need and go to a store in a planned manner to purchase the item. However, the information stage is typically only partially conducted (Husic and Cicic, 2009). One explanation for this is that consumers trust promotions, especially from big brand owners. As such, they may conduct a small search to compare across other similar retailers but do not search the whole market, despite it being both easy and necessary in a digital marketplace (Häubl and Trifts, 2000). For example, if buying a TV from John Lewis then consumers may only search direct competitors, e.g. Currys or Dixons. To get the best deal, however, they may need to search other retailers too, e.g. Tesco or Amazon, all of which can be checked in a matter of minutes online.

For more routine items, promotional advertising encourages consumers to visit the retailer or store for more general purchasing purposes, but not necessarily for the specific goal of redeeming the promotion (Beharrell and Denison, 1995; Verbeke and Vackier, 2004). Even though consumers may be aware of the promotion, research suggests that the goal and information search stages are still primarily disregarded. Disregard for these initial two stages can result in an overreliance on the evaluation of a promotion at the point of sale. For example, trying to evaluate the consideration set for promotions that typically lead to spontaneous purchases, such as buy one get one free (BOGOF), is the only means by which consumers can help themselves obtain purchase utility. Moreover, the literature shows that there are various evaluation processes and intermediary factors that can further influence how the evaluation is conducted (Teare, 1994).

Accurately and efficiently evaluating a product's viability from a consideration set results from a triad of cognitive processes. Based on the EKB and other decision models, Einhorn and Hogarth (1981) suggests a three-step decision framework that describes how consumers evaluate options and reach a decision. The model suggests that after consumers are first presented with a stimulus, e.g. the promotion's signage and the products on offer they begin processing the information. While various models describe how information is processed, all assume that consumers

use either cognitive or intuitive thinking styles. In fact, the research shows that most consumers tend to have a propensity to use one or the other in any one-decision context (Glöckner and Wittman, 2010). Second, using these processing methods, consumers then start to evaluate the most critical decision driver. In the case of promotions, this is a price's fairness, as will be discussed later in this chapter. Having considered the most essential attribute consumers then either evaluate other key attributes or move on to making the decision. Finally, at the point of making a decision a host of other factors can come into effect. For instance, Sinah's (1994) model indicates consumer psychology, a host of brand relationships and situational factors (the promotion type, budget or store type) to be important decision drivers. Support for these assumptions comes from the consistent reporting of the importance of these factors in determining purchase outcome and behaviours throughout the consumer literature (Glaser and Walther, 2013; McGraw and Tetlock, 2005; Sinah, 1994). Although these factors are depicted in Sinah's (1994) model, the relative importance of, and relationships between, these behavioural traits in helping to determine the choice from the consideration set is far more complicated. **Chapter 2** goes into depth in ascertaining how these factors may fit together in helping to determine choice in promotional contexts. Based on this sequence of events, Einhorn and Hogarth's (1981) model suggests that the evaluation is concluded, and a decision made. This chain of evaluative processes has been validated across the pricing and consumer literature and forms the basis of many consumer decision-making models (Karimi, Papamichail and Holland, 2015; Roberts and Nedungadi, 1995; Shocker *et al.*, 1992).

### **1.2.3 Cognitive Models Of Consumer Decision-Making**

In explaining the method by which consumers evaluate options, a variety of theoretical models have been developed (see Table 1). Each model varies across three aspects: processing consistency, selectivity and focus. Consistency refers to the degree to which consumers regularly process attributes and alternatives, while selectivity refers to the frequency with which trade-offs are made. Each model also varies given the focus of the decision. This can be either alternative based (option vs option) or attribute based (e.g. price of option A vs price of option B). Together, these three factors account for each model's cognitive demand, i.e. the amount of processing required to reach a decision. For the most part, the literature finds a positive correlation between cognitive demand and bias, making the less demanding models of decision making more attractive to decision agents.

**Table 1.**

Summary of the consumer decision-making models in the literature (adapted from Bettman, Johnson & Payne, 1991)

Decision Strategy	Amount of info processed	Selective vs. Consistent	Attribute-based vs. Alternative-based	Explanation and key points for each consumer decision model
Weighted Additive	Extensive	Consistent	Alternative	<ul style="list-style-type: none"> <li>• Assumes the decision maker can assess importance weight of each attribute</li> <li>• Consumers consider one option at a time</li> <li>• They examine all attributes and compute weighted sum (value x importance weight)</li> <li>• Choose option with highest weighted value</li> <li>• This method is extensive, compensatory and involves explicit trade-offs</li> <li>• It is considered more accurate but more demanding both on memory and computational capabilities</li> </ul>
Lexicographic	Limited	Selective	Attribute	<ul style="list-style-type: none"> <li>• Consumers select the alternative with best value on the most important attribute E.g. if reliability most important then select car x</li> <li>• This method is limited, attribute-based and uses non-compensatory processing that is selective across attributes and consistent across alternatives</li> </ul>
Satisficing	Variable	Selective	Alternative	<ul style="list-style-type: none"> <li>• Consumers consider alternatives sequentially in the order that they occur in choice set</li> <li>• The value for each attribute is compared against a predetermined cut-off</li> <li>• An option is rejected if it fails to meet cut-off</li> <li>• The first option that passes cut-offs for all attributes is selected (or reduce cut-offs)</li> <li>• Choices are order-dependent, alternative-based, selective and non-compensatory</li> <li>• The extent of processing varies</li> </ul>

<b>Elimination-by-Aspects</b>	<b>Variable</b>	<b>Selective</b>	<b>Attribute</b>	<ul style="list-style-type: none"> <li>• EBA combines lexicographic and satisficing (Tversky, 1972)</li> <li>• Consumers eliminate options that do not meet a minimum cut-off on the most important attribute</li> <li>• The process repeated until a single option remains</li> </ul> <p>E.g. suppose DM's most important attributes are reliability then safety, and cut-off is average value</p>
<b>Equal weight</b>	<b>Extensive</b>	<b>Consistent</b>	<b>Alternative</b>	<ul style="list-style-type: none"> <li>• This is a simplified version of weighted additive (Dawes, 1979)</li> <li>• Consumers consider all alternatives and all attributes but ignore information about attribute weights</li> <li>• The value computed for each alternative is achieved by summing attribute values</li> <li>• They select option with highest sum</li> <li>• Processing is extensive, consistent, alternative-based and compensatory</li> </ul>

---



The lexicographic decision framework suggests that several products are compared via one single utilitarian attribute, e.g. taste, quality or price (Payne, Bettman, and Johnson, 1991). The attribute in question is typically the most important to the consumer and forms the basis of the decision. In promotional contexts, this is almost certainly the price. Therefore, the model suggests a cognitively undemanding approach to decision making that increases the likelihood of utilitarian decision outcomes (Bettman, Luce and Payne, 1998). However, there is the argument that consumers rarely know their own decision preferences which means that even simple decisions may not fulfil a consumer's true needs. (Alba and Hutchinson, 2000) Thus, even decisions based on a single attribute can be biased. Furthermore, this model fails to account for the importance of potentially unconsidered attributes, e.g. product quality or brand reputation, which are found to be equally important in some promotional instances. Thus, the model inherently ignores many of the additional factors consumers find important and so is arguably restricted to contexts where a single indisputable factor is at play.

The satisficing and elimination by aspects (EBA) models suggest that consumers also make decisions on a selective basis (Beach and Mitchell, 1978; Fader and McAlister, 1990). In the former, a cut-off for each attribute is established, and each alternative is considered sequentially until one 'satisfactory' option meets all cut-offs. EBA combines lexicographic and satisficing methods by suggesting that consumers eliminate alternatives one by one according to the most important attribute, e.g. price. While both models increase the efficiency of the decision process, the utility obtained often rests on two principles. Again, decision-makers are explicitly required to know their preferences if they are to choose which aspects or alternatives to consider selectively. However, we have already seen that consumers rarely know the full extent of their preferences and can often base decisions on peripherally processed stimuli such as pack design (Shiv and Fedorikhin, 1999). Decisions made under false pretences and based on factors that hold little inherent meaning to most purchases have the potential to lead to post-purchase dissatisfaction, which in turn has been associated with lower brand loyalty and repurchasing (Cooke, Meyvis and Schwartz, 2001; Gilly and Gelb, 1982). Second, both models require a multitude of individual calculations to proceed to the next evaluative step accurately. However, since research on financial literacy finds the general populace to be mostly illiterate (Williams, 2007), many consumers are unable to consider options accurately (Lusardi, 2008). This would indicate that these models may prove more biasing to decision utility than effective.

The model that most thoroughly evaluates all the decision options and product features is known as the weighted additive model (WAM – Kahneman and Tversky, 1982). The WAM suggests that consumers place an approximate weight on product attributes based on the importance of that attribute to their purchasing goals (e.g. price 50%, quality 30% and taste 20%). Once the consumer has established the most important factors, the factor weights are multiplied by the product's attribute-based position relative to the alternatives. Positions are granted a score of ascending importance, so that for five options, 1 would be the worst option and 5 the best. For example, if the price is the only important factor (100% weight) and, out of five options, A is the second best on price (rank 4) the utility score would be 400 (100 x 4). The most utilitarian option is the one that offers the best value across the range of attributes (Bettman *et al.*, 1991). In the case of the example above, the most utilitarian option would be solely defined by price and represented by the option with the best price and thus a score of 500.

One of the main features of the WAM is the cognitive demands that its use requires. Cognitive demand refers to the number of cognitive resources and attention required to assign weight, assess product rank and make the utility calculation and of all the models the WAM is the most demanding. This has the benefit of providing a comprehensive evaluation process but the disadvantage of needing time and cognitive resources. While a number of traits, such as financial literacy, can alleviate the processing requirements of this model, nevertheless it has been argued that making calculations of this nature for routine purchases is impractical and unlikely (Meyer and Johnson, 1995). Although this is a significant flaw of the model, The WAM approach does propose a consistent decision-making process that allows for trade-offs. For instance, an aspect may not perform well on, say, price, but it may make up for this in quality. Trade-offs are a vital component of any decision process, especially where attribute weights are uncertain or equal (Karlsson, Kuttainen, Pitt and Spyropoulou, 2005; Ostrom and Iacobucci, 1995). Thus, despite this model being the most cognitively demanding and requiring one large calculation, it can also be considered the most robust and flexible. As a result, the framework provides a basis for understanding decisions via a multitude of important attributes across a range of weight indices but also allows for lexicographic decisions to be made, whereby a single attribute could be assigned a 100% importance.

Aside from these conventional models, two other theories exist. The first is the constructive choice theory, which argues that consumer choice is predominantly constructive (Bettman *et al.*,

1998). Due to a combination of processing capacity and time limitations, it is suggested that consumers often construct preferences for product attributes at POS. These preferences are subsequently used to inform the decision strategy (Bettman *et al.*, 1998). In particular, this theory disagrees that individuals directly refer to a central list of memory-based preferences when making a choice, or that preferences are the result of a calculation as in the WAM (Tversky, Sattath and Slovic, 1988). Instead, Bettman *et al.* (1998) suggest that consumers may alter how and what they process as they learn more about the decision in front of them, a notion that is supported by two foundations. The first of these stems from the consistent finding that consumers lack the cognitive resources to think about or accurately define preferences for many situations (Kahneman and Tversky 2013; March, 1978). Because of this, consumers either base decisions on the two most common factors they know of, price and quality, or define their preferences on the spot. Secondly, although consumers often bring multiple goals to a decision, they can easily be influenced by situational factors, e.g. social norms, majority influence or advertising. As the influence of these factors is a significant part of decisions and is unaccounted for by models like the WAM, supporters of the constructive choice theory reject the idea that calculation frameworks provide a valid explanation of consumer decision making.

While constructive choice theory is supported by empirical evidence and is contextually flexible, it has two shortcomings. Specifically, it does not account for the fact that some preferences are not always constructed, nor that some consumers have firm beliefs about what they want. Two of the most common beliefs that remain stable across purchasing contexts are: getting a reasonable and fair price; and getting quality for that price. If the decision is based on these two factors alone, the consumer may already have a set of stable preferences for specific products. This would allow them to retrieve the previously formed evaluations from memory and select the option with the best result (i.e., affect referral, Wright, 1975). These well-articulated preferences may be particularly likely when consumers are familiar and experienced with the products. Moreover, Weber and Borchering (1993) suggest that in salient purchase contexts that rational choice models such as the WAM may be more applicable to describe the decision process. Furthermore, situational factors may intrude. For example, although a consumer may have a strong preference for paying the lowest price, he or she may sometimes pay more for the sake of nutrition. The conclusion, therefore, is that the constructive nature of preferences will depend on the relative accessibility of retrieving the memory-based preferences and the diagnostic ease with which these can be applied to the current situation (Feldman and Lynch

1988). Put simply; preferences may become more constructive as a result of the complexity or stressful nature of the decision problem.

The second theory to challenge traditional models is known as reason-based or emotive choice theory (Shafir, Osherson and Smith, 1993). It proposes that, when faced with the need to choose, decision makers often seek and construct reasons to resolve conflict and justify their choice, both to themselves and others. Since many decisions are the result of evaluating multiple options, consumers typically arrive at what they believe is the best choice. Having discarded the less attractive options, the consumer may still be faced with a choice that is hard to resolve. According to Shafir *et al.*, (1993), consumers will, therefore, search for a convincing rationale for choosing one alternative over another. This can be for inter-personal purposes so that the reasons for the decision can be explained to others, or for intra-personal motives, so that the consumer may feel confident of having made the "right" choice. Importantly, the 'right' choice is not necessarily the most satisfactory. Some decisions may be made from moral principles that are used to override the results of the cost-benefit calculation (Prelec and Herrnstein, 1991). Moreover, this argument suggests that formal decision structures like the WAM may cause conflict between decision options. For instance, when choosing between options A and C, the consumer may realise that if they had earlier preferred A over B and B over C, the logical choice would, therefore, be A over C.

Due to the frequency of similar scenarios, Montgomery (1983) argued that consumers look for dominance structures in their decisions, so that they have a compelling reason to make a particular choice. In support of this, Tversky and Shafir (1992a) show that reasoning offers a compelling rationale to make a choice. Their results suggest that the axioms of a rational choice act as compelling arguments, or reasons, for making a particular decision. In contrast to the classical approaches that typically assume stable values and preferences across similar decision scenarios, research and theories such as the constructivist approach suggest otherwise. Shafir *et al.*, (1993) therefore argue that the reason-based approach lends itself well to a constructive interpretation, in which decisions are reached by focusing on reasons that justify the selection of one option over another.

Based on Shafir *et al's.*, (1993) argument, it is therefore assumed that different contexts, frames and purchasing procedures place differing importance on product attributes, thus eliciting different reasons that then influence the decision. For example, when consumers buy from a retailer

that they trust and are loyal too, the reasoning for their purchase stems from the emotive gratification gained from being loyal as much as it does from getting a reasonable price. However, critics of this theory indicate the possibility of emotive judgments like this impeding the proper evaluation of the available options (Zajonc, 1980). They suggest that focusing on trying to remain loyal can leave consumer's blind to the true utility of a product and can even lead to significantly higher prices being accepted (Krishnamurthi and Raj, 1991). In these cases, considering the reasons for a choice may be unjustified and according to some research can even result in different, and possibly inferior, decisions (Wilson and Schooler, 1991). Furthermore, routine choices such as buying groceries may follow simple decision procedures that involve minimal effort and so require little reasoning. Many decisions, nonetheless, result from a careful evaluation of options during which people attempt to arrive at what they believe is the best choice. To do this correctly, the theory suggests that reasons for and against options play a vital role in justifying a choice.

#### **1.2.4 Quantifying Utilitarian Decision-Making**

In the previous section, a number of models were used to describe the processes involved in consumer decision making. Although each model proposes a different method, they are all tied together by their definition of utility. Some scholars, therefore, suggest that utility can be quantifiably measured via the same formula, irrespective of the approach. Kahneman and Tversky (1982) were among the first to fully quantify utility through their proposed econometric formula that sits within the WAM framework.

The formula suggests that Utility (U) of choosing to buy Product A ( $C^A$ ), can be denoted as  $UC^A$ . The overall utility of choosing to buy option A ( $UC^A$ ) is a function of two aspects. These are the weighted importance of each product attribute and the position of that product compared to others for the individual attribute. First, a weighted importance is placed on each product attribute deemed important by the consumer ( $W^{An}$ ), where n represents the attribute number. For example, price is 70% ( $W^{A1} = 0.7$ ) important and quality 30% ( $W^{A2} = 0.3$ ) important.

Next, the raw score for each critical attribute ( $Rs^{An}$ ) of product A needs to be calculated. For example, the raw score for product A when looking at the price would be denoted as  $Rs^{A1}$ . The raw score for product B when looking at the price would be  $Rs^{B1}$ . To calculate the raw score for price, the position of product A for the price attribute ( $Ps^{A1}$ ) needs to be calculated. To do this, the consumer

looks at the total number of other products in the choice set ( $\sum P^{An}$ ), e.g. 2 and, in this case, considers which of the two has the best price. The products are then ranked in ascending order, based on that attribute, with the worst price being given the lowest rank. For example, if product A has the best price then its position is denoted by  $P_s^{A1} / \sum P^{An}$ , or in other words  $2/2 = 1$ . The raw score is ( $R_s^{A1}$ ) for price is then calculated by multiplying the weight of the price attribute ( $W^{A1}$ ) with the position of product A for price ( $P_s^{A1} / \sum P^{An}$ ). In this case:  $(0.7) \times 1$ . The same procedure happens for the other attributes of importance, e.g. quality until all the raw scores have been calculated. Once complete, the raw scores are totalled ( $\sum R_s^n$ ) and multiplied by 100 to give a total utility score.

In short form the calculation of utility is:

$$R_s^n = W_a^x \times (P_s^x / \sum P^n)$$

$$UC^n = \sum R_s^n * 100$$

While this formula may be used to determine the most ‘satisfactory’ or utilitarian decision from a choice set, it has two main shortcomings. First, the processing time and resources required for a consumer to undertake a calculation of this complexity is substantial. It would be outside the scope of many consumers, not only for routine purchase decisions but even for more substantial involved decisions, such as buying a car (Payne, Bettman and Johnson, 1991). Because of this, Kahneman and Tversky (1982) accept that the formula is mainly used for academic purposes to assess utility rather than being applied practically. In a real-world setting, the formula is probably used in a more general sense, with consumers loosely assigning attribute weights and considering products according to these without completing the complex calculations.

Furthermore, although the formula can assess utility, there is no guarantee that the assessment reflects what could be called ‘true utility’, i.e. the fulfilment of a consumer's physiological and functional needs, ahead of personal and psychological needs. Obtaining true utility is complex and requires the integration of three factors into a decision. These are purchase costs, inventory needs and self-knowledge. Ho, Tang and Bell (1998) suggest a number of costs are often not accounted for in many decisions despite any planned purchase involving a fixed travel cost ( $K > 0$ ), which is not often considered (Alba, Broniarczyk, Shimp and Urbany, 1994); a product cost ( $K > 0$ ), which is almost always considered; and a transactional cost (e.g. time at checkout) ( $K > 0$ ), which is only considered sometimes. Even in unplanned purchases where the cost of travel is zero ( $K = 0$ ), the additional

purchases should be considered as extra costs ( $K > 0$ ). Ho *et al.*, (1998) use this rationale to conclude that the utility of consumer decisions rests with: (1) deciding upon the purchase quantity (Q); (2) evaluating the product price (p); and (3) accounting for travel costs (K). Thus, for even the most basic decisions consumers need to accurately evaluate the costs of a purchase given:  $K + Qp$ . If they do not, whether for time reasons or lack of effort, the calculation of utility becomes skewed. Since these costs form a vital part of a decision's utility but are unaccounted for in the formula proposed by Kahneman and Tversky (1982), the formula can immediately be critiqued.

In addition to the calculations concerning cost, which can be complex especially for unplanned purchases, consumers also need to consider inventory (I). A consumer needs to decide upon the quantity which maximises need but is not wasteful, and this assessment reflects a functional inventory need. Kalymon (1971) argues that truly utilitarian purchasing can only be described by the degree to which inventory needs are accounted for. Despite the importance of this vital decision component, it is commonly only considered for planned purchases (Amorim, Costa and Almada-Lobo, 2014). For promotions, which are largely impulsive, inventory needs are found to be considered even less than for normally priced impulsive purchases, leading to its importance as a factor being almost negligible (Berling and Martínez-de-Albéniz, 2011). However, according to Kalymon's (1971) argument, even for promotional purchases the role of inventory should be fundamental. For example, despite getting good 'value for money' on a larger quantity of items, if these are not needed the waste that stems from not considering inventory equates to a higher cost to usage ratio. For example, if a shopper buys three cartons of milk, originally priced at £1.10 each, for £3 but then throws one away, this will equate to a consumption cost of £1.50 per carton, which is higher than the original price. Given these findings, it is argued that:

If:  $I > Q(p)$  = it is *not optimal / biased* to purchase

If:  $I < Q(p)$  = it is *optimal / utilitarian* to buy

Finally, for utility to be accurately assessed via these formulas, there needs to be a high degree of similarity between a consumer's real and perceived preferences. Perceived preferences, e.g. brand status or packaging can be perceived as being utilitarian but often offer self-gratifying, short-term, utility compared to real preferences, e.g. product quality, health benefits or inventory needs that offer more sustained benefits (Hoch and Loewenstein, 1991; Wertenbroch, Dhar and Khan, 2005). If

there is no similarity between the two, then the utility scores derived from the equation will reflect what is perceived to be a good choice rather than what is.

According to the literature, the similarity between perceived and true utility is a by-product of good 'metacognitive' insight (Labroo and Pocheptsova, 2016). Metacognition describes the ability of self-awareness that allows decision makers to introspect and assess the importance of physiological and functional needs before personal and psychological ones (Gregory, 1987; Dholakia, 2001). In almost all decision scenarios, having a good metacognitive insight helps to deter biases and promote utility. Despite the importance of self-awareness, consumers' aptitudes for this trait appear to be highly mixed, a finding that has caused much debate. For instance, Hutchinson and Alba (1991) show that consumers often overstate the number of attributes they use in choosing a product and usually misrepresent the importance of these attributes. While this finding is well supported in the consumer literature (see Liu, 1999; Van Osselaer and Alba, 2000), others report that consumers can make good predictions of their decisions. This is especially so when the core product attributes are familiar, simple to understand and have frequently been used in other scenarios (Kraut and Lewis, 1982; Reilly and Doherty, 1989). An investigation into the influence of music taste on song purchasing supports this argument whereby purchase predictions about immediately available purchase options were found to be accurate (Ratner, Kahn and Kahneman, 1999). Failure in predicting purchasing outcomes only appears to occur if there is a temporal component involved, e.g. how much the consumer would like the product in two weeks' time (Khaneman and Snell, 1992). In such scenarios, consumers were not able to accurately predict the factors necessary to make a choice that fulfilled their goal, or which products should be included in the choice set.

More recent research also supports the theory that consumers can predict their decision preferences accurately. Riquelme (2001) was among the first to quantifiably assess the accuracy of consumer predictions about the importance of product attributes in the final selection of the product. More specifically, his research identifies how much knowledge consumers have about a more involved type of purchase, in this instance a mobile phone. Using a sample of 94 consumers, the importance ratings of six attributes and the preference for several advertised mobile phone plans were considered. Two measures assessed the consumers' self-knowledge. The first compared the importance of product attributes reported to those used in the decisions, while the second compared the predicted purchase of a specific model of mobile phone against what was chosen. Interestingly,



the results show that consumers had good predictive powers over the products they would choose, and which attributes were important in the decision. However, this knowledge was not perfect and could be moderated by many factors including the ability to touch, taste or see the products on-shelf (Balaji, Raghavan and Jha, 2011). For example, recent research shows that purchase intentions for products previously unconsidered increased when consumers can physically touch the product. According to tactility research, it does this by and activating the neural mechanisms associated with pleasure (Liu *et al.*, 2018). Elsewhere, it has been reported that the quality perceptions and purchase intentions of wine could significantly differ as a function of background music - classical music increasing both (Areni, and Kim, 1993). These studies show that even if consumers know their own preferences, a number of environmental factors can change them.

Given these criticisms, it is hard to determine how well Kahnemans and Tversky's (1982) econometric formula of utility can measure true utility. Aside from failure to account for cost and inventory needs, the measure of utility still largely rests on the consumer's ability to define their own preferences. Although subject to debate, the presented research would suggest that they are indeed able to do so. This is especially true for common and essential attributes that are a part of every kind of decision, e.g. price or quality. While this formula may be problematic for more complex types of purchasing where, say, a decision may have several attributes of equal importance or the potential for high costs, it may work well for promotions, due to the core value-price offering of a promotion. Since price is the central, and perhaps only, driver of a promotional purchase the importance of this attribute across promotions is likely to be known and fixed (Bell, Chiang and Padmanabhan, 1999; Blattberg, Briesch and Fox, 1995). The casual offering of promotions, combined with ample support for the theory of metacognitive insight, provides a sound rationale to suggest that consumers will be able to define their decision process for this purchasing type accurately.

### **1.2.5 Model Evaluation and Research Gap Identification**

To successfully evaluate the decision utility of promotions, it is necessary to determine which model(s) provides the most accurate explanation of today's purchase process. To make this assessment, five central findings from the current consumer decision-making literature deserve consideration. Firstly, it appears that the decision to select any one particular option depends critically on the goals of the decision maker. Selection largely depends on the extent to which the consumer's goals minimise the cognitive effort required to make a choice. It is also dependent on the ability to

maximise decision accuracy, minimise the likelihood of decision-making conflict, or a combination of both. Secondly, choosing between options depends on the complexity of the decision task. Options that are superior to the most prominent attribute, e.g. price, relative to others are favoured as the task becomes more complicated. Research finds that this is due to the adoption of more straightforward decision processes with increasing task complexity. As accurately determining the true and representative price of the items in a promotion can be complex, some suggest that consumers rely on the most basic factor, such as price (Bell *et al.*, 1999). Next, the context of the decision significantly impacts the end choice. Moreover, the relative value of an option amongst the choice set depends not only on the characteristics of that option but also on the characteristics of the other options in the choice set. Fourthly, the way in which a purchase proposition is posed yields a different outcome. For example, strategically equivalent methods for asking about preferences can lead to systematically different decisions. Finally, a decision can significantly depend on how the choice set is framed i.e., by price or emotion.

Based on these findings, it is logical to assume that consumers have an inventory of strategies for solving any one decision. In fact, research shows that consumers vary in terms of the strategies they possess (Roedder 1981; Roedder *et al.*, 1983), with each strategy being effective only so far as the situation permits. Therefore, different strategies will be more or less accurate, involve more effort or be easier to justify given a choice's context and complexity. For example, the WAM (Kahneman and Tversky, 1982) may offer the most accurate way to maximise utility but is very cognitively and emotionally demanding because it explicitly allows for trade-offs. The quality of product A may be negated by the price if cost is the most essential attribute. This makes the end decision difficult, especially if two attributes are considered almost equally important. If trade-offs between attributes are less likely, such as in the case of promotions, then the demands of this model decrease. Given the flexibility of the model to account for one or one hundred purchase attributes, its use in less complicated cases might be more beneficial than another more attribute driven strategy, e.g. satisficing. That said, it is less clear how weighted adding aids the justification of choice as thorough processing may support justification, but trade-offs hinder it. Elimination-by-aspects, on the other hand, may be easy to explain and defend (Tversky, 1972) as it avoids emotion-laden trade-offs, and varies in its effort and accuracy depending on the characteristics of the choice task. However, this theory suggests that products are evaluated sequentially, which is consistently thought to be inaccurate.

After evaluating the contemporary models of consumer decision-making, two things become evident. First, there are many factors unaccounted for by even the most robust model, the WAM. For example, the early models fail to account for the inventory and costs, and thereby do not consider the full scope of a decision. Second, in explaining why no one model has received unanimous support, contextual factors seem essential. For example, in high involvement purchases, such as car acquisitions, consumers have been found to actively evaluate and assign importance to product aspects (Sudhakar and Venkatapathy, 2005). This would support the WAM framework. Contrastingly, in FMCG settings consumers only inspect 1.2 brands per product category and process equally few (Hoyer, 1984; Dickson and Sawyer, 1990). When asked to recall a promotion and its design elements, only 49% of consumers could accurately do so (Dickson and Sawyer, 1990). To minimise cognitive effort for more routine purchases, the lexographic framework (where a decision is based on a single attribute) could, therefore, offer consumers the highest utility. Even for promotions though, the likelihood of only evaluating price, and not brand or quality, is unlikely.

Not only is each of the contemporary decision models contextually bound, but they also fail to consider moderators of the decision process. The marketing literature suggests that product placement and price presentation are significant in determining value perceptions (Karrh, McKee and Pardun, 2003). Contrastingly, the psychological literature suggests that behavioural traits significantly moderate the way in which decisions are made. For instance, brand loyalty can increase the likelihood of more hedonistic, less considered choices (DeVecchio, 2005). With these dimensions having received little consideration in this context, either in unison or individually, a research gap emerges. Understanding how both dimensions impact the decision process will be vital in attempting to encourage fair pricing practices and inform consumers of the pitfalls of making routine decisions. The extent to which consumer psychology has been found to affect decisions will be discussed in **Chapter 2**.

Because of these psychological drivers, the constructivist approach suggests that the advantages and disadvantages of any of these traditional strategies will be affected by both the individual differences and goals of a consumer. Among the individual differences, the ability to analyse and select the most relevant information improves with expertise (Ericsson, 2006; Russo and LeClerc 1994). It is also assumed that consumers select the approach that best meets their goals for that situation. Consumers may, therefore, select different approaches in different situations as their goals,

the constraints of the situation, and their knowledge change. Constructing and tailoring decision techniques in this way seems highly plausible and if combined with a justification or reason-based approach may even help accurately describe decision-making above what these models do alone.

Although the constructivist and reason-based approaches provide a solid evidence-based rationale for understanding decision-making, their lack of prescriptiveness is a significant flaw. In particular, while it may be true that decisions can vary by context, these hypotheses offer little in the way of testing other than theorising that anything is possible. For experimental purposes, this is naturally difficult. Furthermore, evidence suggests that consumers are relatively capable of predicting the factors relevant to their decisions, then it means we can begin to predict decision utility with some validity. In a promotional context where price is the most critical factor, it is reasonable to assume that using a modified WAM approach may be the most suitable method for calculating utility. This requires the incorporation of inventory needs and costs into the equation of the WAM and fixing the setting across studies to account for contextually different effects on decision-making. In particular, using a familiar purchase scenario, such as buying promoted items from grocery stores, increases the likelihood that consumers will have a temporally stable set of decision strategies and preferences.

### **1.3 Introduction to Promotions**

#### **1.3.1 Defining Promotions and Promotional Effectiveness**

Much research effort has been directed at understanding the factors that drive promotional effectiveness. Promotional effectiveness is commonly defined as an increase in purchase value perception and sales (Blattberg, Briesch and Fox, 1995; Chandon, 1995). Price promotions, the tools through which this is achieved, can thus be thought of as retailer-designed practices used to increase the speed, efficiency and frequency of purchases (Blattberg and Neslin, 1990, Kotler and Keller, 2009). Each promotional method, or practice, can thus be considered regarding its acquisition convenience, redemption efficiency and frequency of exposure. Promotions are frequently viewed through this triad by the literature (Chen and Qin, 2013; Ivy, 2008) and come in three forms (Blattberg and Neslin, 1990): ‘trade’, ‘retailer’ and ‘consumer’ promotions, which differ in their target market. As the names suggest, ‘the latter two promotions are designed to target ‘end-consumers’, the users of the final product. Contrastingly, trade promotions offer discounts, often as suppliers, to

organisations. Given the breadth of their use, promotions are relevant to almost all business activities and have increased in both frequency and sophistication since the 1960s.

As interest in the practical use of promotional practices increased, a redefinition of the term was advocated (Brassington and Pettitt, 2000). This newer definition suggests that promotions should be considered as techniques that form part of the organisation's strategic framework to inflate a product's value above normal levels. Whether inducing short-term 'profit spikes' or stabilising an organisation's future revenue plan, their strategic effectiveness has been regarded as indisputable (Brassington and Pettitt, 2000; Gamliel and Herstein, 2011). In support of this, research has found that during some months, 32% of grocery sales were made up of promoted products. In May, when promotional sales are traditionally lower in the UK, they have been reported to be as high as 43% (Nielsen Wire, 2009). The increased adoption of promotional practices by retailers is likely to be a result of the short-term advantages, such as sales spikes, which appear to outweigh any possible long-term disadvantages (Belch and Belch, 2012).

While retailers generally accept the drawbacks of promotions (e.g., encourage price wars and can delay purchasing), active delays in purchasing are indicative of a behavioural, rather than economic, motives. However, consumer psychology is an area that appears to be consistently overlooked by organisations when considering their long-term pricing strategy (Deshpande and Webster, 1989; Huber, Herrmann and Wricke, 2001). For instance, research has pointed to promotions being effective in retaining existing consumers but not attracting new ones, despite this being any retailer's long-term aim (Belch and Belch, 2012). In the case of in-store promotions, where consumers can interact with products, continuous promotions convert 'value seeking' consumers to a retained consumer base of 'bargain hunters'. This shift in purchasing mentality promotes the expectation of lower prices, posing a considerable problem in the longer term when a return to the RRP is perceived as a price increase. Existing consumers may switch retailer if lower prices are not maintained, and this inevitably reduces perceptions of brand value and exclusivity (Pride and Ferrell, 2010; Shimp, 2010; Lamb, Hair and McDaniel, 2009). Given these findings, an increasing emphasis has been placed on the behavioural dimensions of promotional effectiveness, although this requires considerable expansion.

### 1.3.2 Overview of Promotional Research in The Psychological Literature

In seeking to understand how a consumer's psychology might mediate promotional outcomes, scholars look at questions such as 'why are promotions so effective?' and 'why has their use become standard practice?' Yeshin (2006) considers these questions using sales data, empirical research and market analytics. This research primarily aims to examine the relationships that appear to exist between specific consumer typologies and promotional-based decision-making (Kotler, 2003). For instance, demographics (income, age and social class), a consumer's psychology (personality, information processing method and goal orientations) and promotional architecture (frequency, impact and size) are important in explaining why and how consumers decide to purchase promoted items (Jayasingh and Eze, 2012; Pillai and Kumar, 2012). As a result, two research streams have formed, one focussing on inter-personal, typological research and one that investigates the influence of specific promotional attributes on promotional effectiveness.

Early work on inter-personal factors profiled those particularly 'prone' to, or likely to engage in, promotional purchasing and acceptance, sometimes known as 'deal proneness'. Across the literature, demographics, personality, past purchase experience, cognition style and brand perceptions have all been found to be influential in determining coupon acceptance and redemption (Blattberg, Buesing, Peacock and Sen, 1978; DelVecchio, 2005; Montgomery, 1971; Lichtenstein *et al.*, 1995). From this array of findings, a typology of those who are particularly deal prone has emerged. A typical deal prone consumer is a middle-class mother, who is both agreeable and conscientious (Bawa and Shoemaker, 1987a, 1987b, 1989; DelVecchio, 2005). Consumers of this type usually engage in deep cognitive price processing that they believe will allow them to find and obtain 'value for money'. However, findings also suggest that because deal proneness encourages consumers to regard promotions with less scepticism, the decision process may be biased should the promotion actually offer little savings. Although coupon usage being relatively infrequent today compared to other promotions (Bolton, Shankar and Montoya, 2010; van Heerde and Neslin, 2008), the importance of psychological factors indicated in similar contexts provides a sound rationale for conducting further work.

More recent research has investigated more common pricing practices such as 'two for £4' or '20% off'. The prevalence of these practices, which are sometimes experienced daily, naturally increases in the relevance and use of promotions in daily purchasing (Trinh, Dunn and Bogomolova,

2012). For instance, recent findings indicate that even the simplest promotions have recall rates of up to 76%, compared to only 54% for television advertisements (Promotional Products Association International, 2004). However, it was also found that consistently high exposure to promotions has been reliably associated with deal prone behaviours, leading to an increase in the trust of promotions and their value offering (Chandon, Wansink and Laurent, 2000). Like the early coupon literature, this more recent research also suggests that normal consumers may be equally likely to buy a product inferior in price, quality and value as a result of current promotional tactics (DeVecchio, 2005; Lichtenstein, Netemeyer and Burton, 1995). As a result, engaging with promotions in today's retail environments could have the significance to bias purchase decisions.

However, purchase experience and realistic price expectancies have been shown to be empowering traits that may reduce the likelihood of making biased decisions (Lemmerer and Menrad, 2015; Zhuang and Alford, 2015). Specifically, experience gives a degree of certainty when evaluating prices against those offered by other retailers, while realistic price expectations confer good benchmarks from which to begin evaluations. Nonetheless, research suggests consumers have little knowledge of either retailer marketing efforts or of market representative regular real prices (RRP). Consumers, therefore, appear un-informed when making price fairness judgments, so cannot accurately evaluate the utility of the promoted offering. This lack of information removes the inherent accuracy of price expectancies, with consumers expecting prices which are just not feasible, consistent with, or representative of the market. How these traits affect decision utility will be explored in **Chapters 3 and 5**.

The second field in the promotional research examines a promotion's design and concerns itself with the strategic elements that define a promotions' exclusivity and the method by which the price is framed. Promotional length is one of the most important of these elements. It describes the amount of time that a promotion is on display and thus essentially defines its exclusivity. Promotional length can also directly influence the way consumers make decisions by conditioning and reinforcing promotional beliefs (Lee and Tsai, 2014). For instance, lengthy promotions have been found to manipulate consumers' price expectations (Kalwani and Yim 1992, Mayhew and Winer 1992), with lengthy promotions increasing the expectancy for a discount. This can lead to the biased view that a discounted price is fair (Awunyo-Vitor, Ayimey and Gayibor, 2013; Palmeira and Srivastava, 2013).

Promotional design has also been investigated in terms of price framing (Darke and Freedman, 1995; DelVecchio, Krishnan and Smith, 2007) and typology, e.g. discount vs reward (Folkes and Wheat, 1995; Sinha and Smith, 2000). The price framing method, otherwise known as promotional practice, describes the way in which a price is presented to the consumer. One promotional design uses a 'freebie' price frame that doesn't offer a discounted price but offers more value for money, e.g. buy one get one free. Another method is to state a discount from the RRP, such as 20% off. Although there are many different price framing methods, they appear to have similar effects on purchasing. For instance, simply using the words 'discount', 'free' or 'bundled' increase purchase intentions significantly (Shampanier and Ariely, 2006). Similarly, the misconception that promotions always increase value means that bundled items are often accepted despite the bundle offering no real value (Arora, 2008). The most frequent methods of promoting purchases are 'freebies', loyalty points, money off schemes, premium bundles and add-on charges (Belch and Belch, 2012; Ferrell and Hartline, 2008). Of these, discounts and freebies, where the reward is perceivably guaranteed, are the most effective in increasing value perceptions and purchase intentions (Gamliel and Herstein, 2011). Thus, these two methods of pricing are most often covered by the literature.

### **1.3.3 Scope of Current Research Gaps in Promotional Research**

Despite the existence of more than 2000 articles dedicated to understanding promotional methods (Leone, Robinson, Bragge and Somervuori, 2012), only one meta-analysis (Krishna *et al.*, 2002) and one review (Ahmetoglu *et al.*, 2014) have considered consumer decision-making in promotional contexts. While age limits the former, the latter summarises the literature concerning each practice and its influence on consumer behaviour. Ahmetoglu *et al.*, (2014) highlight the mechanisms and framing methods each practice has on consumer behaviour and outline practice-specific effects on decision-making. This is an area that is currently not well understood, with few papers concerning how decision utility varies between practices, and how mediated by a consumer's psychology these effects are.

The review presented here expands that of Ahmetoglu *et al.*, (2014), by updating the findings with 597 newer pieces of research. However, while previous reviewers focused on a broader range of promotional practices, this review considers only four. These are: 'Buy one get something different free' (BOGDIF); Drip pricing (incremental price increase via 'add-ons'); Value-



Based pricing (whereby the value of the product compared to price is indicated) and Bundling (whereby similar products are grouped). The rationale for choosing these four stems from four research gaps.

First, each of the promotional methods drives sales in different ways. While there are similarities between the decision theories driving all promotional practices, these four offer a good contrast between each other. For instance, value-based pricing relies primarily on anchoring, drip pricing on adjustment bias and BOGDIF on loss aversion. The difference between each practice will be discussed across the chapters.

Secondly, these four practices, or slight variations of them, are the most commonly used by today's retailers. As they are also the most relevant to consumers, their use has ecologically logical implications. For instance, if practice specific effects to decision utility are found then these insights can be used to determine fair pricing practices further, inform consumer behaviour in today's current market and help organisations improve their current pricing practices.

Thirdly, these practices have already gained attention from policymakers, who have called for additional investigations into their behavioural effects (Rotemberg, 2011). This is especially the case for drip pricing, which is surrounded by controversy and already restricted in Australia. Researching these practices further will provide new insights into a topic that is of interest outside of academia.

Finally, these four promotional methods have a good, but still novel, body of research dedicated to understanding them. For instance, while bundling is relatively well understood, very few papers have considered 'free' pricing practices. Despite a greater focus on some of these practices, the mechanisms that drive decision bias from these practices is still unexplored. In light of these considerations, investigating these four practices offers some potentially novel and groundbreaking findings to the literature. Furthermore, in the context of this research, the considerable exposure and salience of these practices warrant the name 'The Big Four'.

The remainder of this literature review will explore the little practice specific work on promotional decision making, as is called for in the recent literature (Ahluwalia, Burnkrant and Unnava, 2000; Barone and Roy, 2010; Kimmelmeier and Oyserman, 2001; Oyserman *et al.*, 2002). Based on this research the review will highlight some of research gaps that deserve attention. First, the underlying decision theories commonly attributed to the functioning of promotional practices will be described and evaluated. These will help show why certain practices are so effective

at increasing sales and also why they have the potential to bias promotional decisions. Next, a detailed literature review will be undertaken for each of the 'big four' promotions. This will consider how a consumer's behaviour and perceptions interact with the practice to determine decisions. The general conclusions will include a discussion of potential avenues for future research.

#### **1.4 Mechanisms Underlying Promotional Purchasing**

As the interest in promotional practices has increased, the components underlying their effectiveness in increasing sales have come under greater scrutiny. Unlike other psychological phenomena, promotional methods were developed by organisations and later tested by researchers. They are not a product of academic investigation, but rather a symbiosis between practice and theory, and newer promotional methods such 'freebies' and price discounts are relatively unexplored. In attempting to understand what drives promotional effectiveness the research often refers to the theories used to describe other types of decision making (Diamond and Campbell, 1989; Sinha and Smith, 2000). Many theories, including heuristics, anchoring, adjustment theory, prospect theory (Kahneman and Tversky, 1979), price framing and deal proneness (Ailawadi, Gedenk, Langer and Neslin, 2014), have emerged as influential in increasing promotional purchasing.

##### **Heuristics**

A widely accepted concept in decision theories is that decision makers use mental shortcuts, called heuristics. More usually known as 'rules of thumb', heuristics provide a guide for consumers' actions based upon past experiences and outcomes. Their use significantly aids decision efficiency in contexts that involve a lot of choices (Kahneman and Tversky, 1979). For instance, as some retailers have around 50,000 stock keeping units (SKUs) and the average shopping time is only 30 minutes, consumers need an efficient and concise method to decide between products.

However, as a heuristic's dependence on past purchase experience and brand preference can potentially lead to bias (Chaiken and Maheswaran, 1994; Krishna *et al.*, 2002; Mandrik, 1996; Xiao, 2015). Examples of this include the strong association between price and quality or promotions and savings. In both of these examples, consumers draw from their past, successful, encounters of these associations and apply them to the new context. However, advertising greatly influences this process too, with messages like 'price crunch – great value' becoming as applicable to decisions as real experience (Mulhern and Leone, 1990). With the promotion-value association being so common, it

has been suggested that consumers can easily purchase more expensive, less valuable, products when they are promoted (Ahmetoglu *et al.*, 2014; Morwitz, Greenleaf and Johnson, 1998). The assumption that the promotion offers value because of marketing and experience is central to explaining such findings. Consequently, some scholars suggest that price associations are the fundamental components of all promotional practices, with consumers being easily deceived by a ‘perceived’ discount-value heuristic (Della and Norberg, 2013).

### **Anchoring Theory**

Anchoring theory suggests that consumers ‘anchor’ or fixate on the first or most prominent advertised price, using it as a benchmark in price acceptance (Estelami, 2003; Kahneman and Tversky, 1979; Wansink *et al.*, 1998). Anchoring on a high price can increase willingness to pay for otherwise rejected medium-priced products, thus creating a state of perceived reward even when none exists (Ahmetoglu *et al.*, 2014). Anchoring effects have been strongly documented across the decision-making literature and are common in-house purchase negotiations. For example, it has been shown that high anchors lead to agreed prices that are 50% higher than when medium/low anchors are used (Orr and Guthrie, 2005).

Much of the research on this topic suggests that the most influential anchors are those that are realistic for the product category but not high enough to be considered unacceptable (Inman, Russell and Rosellina, 2009). However, exact ratios or proportions between the magnitude of the anchor and expected results are debatable, highly contextual and thus need further testing (Furnham and Boo, 2011). When applied to promotions, consumers tend to anchor on the RRP, perceiving any discount from the RRP to offer value. This process of promotional effectiveness is further expanded given anchoring’s association with adjustment bias (Epley and Gilovich, 2006). This explains how one could also anchor consumers at lower prices, later increasing them with little consequence.

### **Adjustment Bias**

Adjustment bias refers to the inability to adjust smaller segmented prices into totals via a series of quick numerical calculations. It also refers to the commonly found inability of consumers to segment, calculate and re-evaluate prices (Diamond and Campbell, 1989). The effect is thought to be especially prominent in many promotional contexts, given time constraints and the complexity of breaking up the promotional prices (Eberly, 1994; Tversky and Kahneman, 1974). Numerous papers have reported

that many consumers are unable to calculate and compare the single unit price of a promotion offering ‘buy 4 for £5’ (Manning and Sprott, 2007; Steven *et al.*, 2003).

With in-store calculations occurring in seconds, not minutes, the likelihood that consumers fail to adjust prices correctly is a unanimous finding among the promotional research (Kahneman, 2003). Such effects are contextual, however, as the likelihood of adjustment bias is less prominent for online purchases, where consumers can quickly switch and delay purchases (Brynjolfsson, Hu and Rahman, 2013). In either context, a degree of numerical literacy is required to maximise the accuracy and efficiency of the adjustment process (Clark and d’Ambrosio, 2008; Lusardi and Mitchell, 2009; Howells, 2005). However, with evidence suggesting that even among educated consumers basic financial literacy is poor, failure to adjust prices after anchoring poses a significant concern for utilitarian decision-making (Bernheim, 1995, 1998; Lusardi and Mitchell, 2007; Smith and Stewart, 2008).

Even if enhanced by numerical literacy, accurate price adjustments rely heavily on consumers’ internal reference prices (Frankenberger and Liu, 1994; Urbany, Bearden and Weilbaker, 1988). IRPs are assimilated product prices from past purchases that act as benchmarks of price fairness (Darke and Dahl, 2003; Schons *et al.*, 2014). For instance, when assessing if a loaf of bread warrants a price of £1.50, the consumer will recall their IRP for either bread in general or that specific product. However, if the internalised price is not accurate, the starting benchmark is non-representative and thus biased before the adjustment even occurs. Considering this, research commonly advocates the importance of an experiential component, with regularly bought products having more realistic and accurate IRPs (Kinard *et al.*, 2013; Laroche *et al.*, 2003). During new purchases, consumers assimilate prices from similar products to create a ‘fair price’ (Lowe and Alpert, 2010). In creating these ‘fair’ prices, consumers can be particularly susceptible to internalising promoted prices from similar products in the purchase environment, especially if the discounted context and price are not heeded (Kalyanaram and Winer, 1995; Mazumdar *et al.*, 2005; Rose, Clark, Samouel and Hair, 2012). In a practical sense, this explains why some adjustment dependent promotions, e.g. drip pricing, work particularly well, as will be discussed.

## **Prospect Theory, Mental Accounting and Sunken Costs**

Among the other underlying decision theories, the most prominent in the promotional literature is prospect theory. First conceptualised by Thaler (1985), the theory suggests that consumers have a mental accounting system that frames purchases as either ‘segregated gains’ or ‘combined losses’. It also hypothesises that ‘losses loom larger than gains’, given a perceptual difference between the importance of each (Kahneman and Tversky, 1984; Puto, 1987; Thaler, 1985). Specifically, it is suggested that the fear of loss outweighs potential gains, with comparatively equal rewards compared to losses yielding the same effect across investigations. In a promotional context, Thaler (1985) suggests the ‘reward’ or ‘loss’ is determined by the perceived difference between promoted price and RRP. Price discounts, which are directly comparable, can thus be viewed as reduced losses. Contrastingly, other promotions such as ‘freebies’ are considered as segregated gains (Ahmetoglu *et al.*, 2014). These differentiations can be seen across promotional practices and will be discussed further.

The concepts of mental accounting and the sunken cost fallacy are complementary to prospect theory. The former suggests that consumers perceive value in relative, rather than absolute terms (Thaler, 1995). Specifically, consumers obtain transactional value not only from the functions of the product but also the perceived value of the deal. Thaler (1995) goes on to suggest that consumers alter their perception of money according to its origin and use. For instance, small gains (e.g. winning £50) are likely to be treated as usable income and spent while more substantial gains (e.g. winning £5000) are viewed as wealth and invested (Thaler, 1985, 1999). This concept can play an essential role in some promotions where the total price is segmented, such as drip pricing. Specifically, when the segments are viewed as a small part of a larger amount, the smaller individual prices become less relevant (Thaler, 1999). Consequentially, if price segments such as surcharges are inflated, consumers are likely to accept them to obtain higher transactional value. For promotions, this transactional value is typically considered as ‘value for money’.

Sunken cost theory suggests that consumers may irrationally continue to repurchase, or follow through with a purchase, due to previously invested resources such as costs or time. Like the status quo bias, this can be viewed as a commitment bias, whereby consumers try to remain consistent with commitments they have previously made. By doing this, consumers try to minimise conflicts between intentions and behaviours (Burnkrant and Unnava, 2000). For instance, after deciding to eat

at a buffet, many people will over-eat, despite their intentions not to, just to get the best value for money possible. Furthermore, the literature also shows that when the costs of a decision outweigh the benefits, consumers mentally account for this differently. In these cases, consumers maximise gratification to compensate for the cost, as in the case of over-eating at the buffet. However, since the consumer may undervalue the actual cost, due to poor mental accounting (Kivetz and Simonson, 2002), the likelihood of the sunken cost fallacy increases. In promotional contexts, the perceived 'value for money' of one product attribute may thus outweigh a potentially higher overall cost. Because of this, the price itself becomes one of the core decision drivers (Thaler, 1999).

### **Price as a Bias**

The concept of price as one of the most common, influential drivers of promotional decision-making is widely supported by the literature (Ahmetoglu *et al.*, 2014). Importantly, the price is also considered a heuristic (Sinha and Smith, 2000), and has been shown to determine a product's perceived quality, social desirability, functionality and exclusivity (Zeithaml, 1988). In the case of FMCG goods, it may also help determine perceptions of taste, nutritional information and procurement methods. However, using packaging, prices and branding as indicators of purchase value can be highly misleading. In reality, a product's true utility to a consumer is often based on a variety of factors, such as nutritional quality, safety or engineering, and so relying on price as a decision driver can be highly biased (Andrews, Burton and Netemeyer, 2000).

In promotional settings, the price is naturally the primary decision driver given that most promotions offer monetary value. The association of promoted prices with value is therefore suggested to be the most common and underlying theory behind promotional effectiveness. As has been discussed, it can also be the most detrimental factor in decision-making, as the assumption that promotions offer value leads to high promotional acceptance with little evaluation. In fact, research consistently finds that due to such price assumptions promotions that offer no monetary value are still frequently purchased (Arora, 2008). Since price is the primary driver of promotional effectiveness, it is no surprise that the literature finds that the importance of price is highly dependent on promotional design.

### **Promotion Length and Exposure**

Diamond and Johnson (1990) were among the first to empirically investigate promotional length and exposure as a means of differentiating how consumers perceive prices. Their work suggests that over time discounting leads to more biased reference prices than non-monetary promotions (Diamond and Campbell, 1989). As was explained, exposure and length of promotions increase the likelihood of the discounted price being internalised which can later lead to original RRP being seen as a price increase (Lowe and Alpert, 2010). Such findings represent skewed price expectations that inevitably bias decisions if these prices are used in future evaluations. Therefore, to avoid unrealistic price expectations consumers, need to internalise the most representative price with the correct context. To do so requires the ability to adapt, adjust and segregate discounted prices from RRPs. However, adaption level theory suggests that most consumers do not possess the aptitude to do this (Schons, Rese, Wieseke, Rasmussen, Weber and Strotmann, 2014). On the other hand, non-monetary promotions, such as ‘freebies’, offer a different, more recognisable, value proposition and so require less effort from the consumer (Ahmetoglu *et al.*, 2014). Due to this, it is generally concluded that the way promotional value is framed can be significant in determining decision outcomes. Recent work has begun exploring what utilitarian value in promotional contexts might consist of, e.g. price vs quality or, say, discount size.

### **Understanding the Value/Reward of Promotions**

Although previous research assumed ‘savings’ to be the primary driving force behind promotional effectiveness, more recent work has developed a hexagonal framework of utilitarian and hedonistic promotional benefits (Chandon, Wansink and Laurent, 2000). Utilitarian benefits of promotions are characterised by savings, quality and convenience factors; hedonistic benefits by value expression (social recognition), exploration (variety seekers) and entertainment value. Chandon *et al.*, (2000) report that ‘discounting’ practices rely on utilitarian benefits and non-monetary promotions on hedonistic benefits.

When applied to purchase utility, utilitarian benefits can thus be considered more quantifiable, with savings directly measurable as a deviation from the RRP and past prices paid (Jackson and Burke, 2008). Importantly though, the utilitarian benefits of decisions are more deliberate, consistent and well processed, while hedonistic-based decisions, which are highly subjective, are driven by emotions and prone to bias (Chandon *et al.*, 2000). It was concluded that to

achieve the best 'value for money', it is vital to consciously engage with and calculate the value promotions offer, both from a monetary and personal perspective.

### **Consumer Psychology in Driving Promotional Effectiveness**

From an understanding of the underlying biases driving promotional effectiveness scholars have been able to develop quantifiable predictors of promotional effectiveness. One of the most prominent of these is 'deal proneness,' the susceptibility to erratically purchase products simply because they are being promoted (Lichtenstein, Netemeyer and Burton, 1990, p. 55). As deal proneness can explain a considerable proportion of the variance among promotional effectiveness it is sometimes considered a latent, personality-type trait (DelVecchio, 2005; Lichtenstein *et al.*, 1995). Similar to other personality traits, 'proneness' influences how the utility from promotional purchases is perceived, in the same way, that conscientiousness aids in 'rationality' (Krishna *et al.*, 2002). Deal proneness is therefore associated with a psychological need to seek, redeem and purchase promoted products. As a result, the gratification gained from purchasing is often higher than the actual utility gained from the product's features or unique selling points (Chandon *et al.*, 2000). Thus, there is direct evidence to support the link between a consumer's psychology and the way they interact with and purchase promotions.

The theory of deal proneness proposes that promotionally prone consumers tend to be well-educated females of the middle class, who have a moderate income and live in more densely populated areas (Bawa and Shoemaker, 1987a, 1987b, 1989). They seem to enjoy purchasing (Garretson and Burton, 2003) and consider the reward associated with promotions to be of their own doing (Schindler, 1998). However, this type of consumer is especially sensitive to the value promotions offer, especially when savings are high. When discounts are great the deal prone consumers are described as 'getting a rush of exhilaration' because they are a) getting value for money and b) because the value is in the form of a promotion (Schindler, Lala and Corcoran, 2014). From this exhilaration the consumer is more likely to accept impromptu deals, which has the potential to lead to less utility should the promoted price actually offer no savings. While developing the profile of promotion prone consumers, the effects of other consumer traits and behaviours associated with purchase decisions have been considered, and these are summarised in Table 2.



**Table 2.**

A summary of the behavioural mediators of promotional effectiveness.

<b>Factor</b>	<b>Independent Variable</b>	<b>Outcome</b>
Demographics	Children	Having children did not influence promotional usage behaviours (Price, Feick and Guskey-Federouch, 1988).
	Household Income (\$)	Positively influenced the number of promotions redeemed per week (Price <i>et al.</i> , 1988).
	Education	Did not predict promotional use behaviours (Price <i>et al.</i> , 1988).
	Household Size	Positively influenced the number of trips to purchase using coupon promotions, the number of promotions used per week and the value of promotions used per week (Price <i>et al.</i> , 1988).
Psychographic Traits/Attitudes	Price Quality Perceptions	Positively correlated with prestige sensitivity in a US and Chinese sample (Zhou and Nakamoto, 2001) and with 'deal proneness' (Blattberg and Neslin, 1990; Kahn, 1998; Lichtenstein, Ridgway and Netemeyer, 1993).
	Prestige Sensitivity	Negatively correlated with price consciousness in both a US and Chinese sample, and with value consciousness in a Chinese sample (Zhou and Nakamoto, 2001).
	Value Consciousness	Positively correlated with price consciousness in both a US and Chinese sample but with 'deal proneness' only in a US sample (Zhou and Nakamoto, 2001).
	Price consciousness	Positively correlated with 'deal proneness' in a US sample (Blattberg and Neslin, 1990; Lichtenstein <i>et al.</i> , 1993; Shimp, 1990; Zhou and Nakamoto, 2001).
	'Deal Proneness'	Positively correlated with value and price consciousness in a US sample (Zhou and Nakamoto, 2001).
	Attitudes toward using e-coupons, internet searching and e-coupon subjective norms	Significantly predicted 'deal proneness', which then predicted the usage of coupons and their effectiveness (Chen and Lu, 2011).
	Impulsiveness	Decision impulsiveness positively correlated with 'deal proneness' (Blattber and Neslin, 1990).

Processing Type	Need for Cognition (NFC)	Positively correlated with ‘deal proneness’ (Inman, McAlister and Hoyer, 1990; Schneider and Currim, 1990).
Price Internalisation	External price based IRP	Positively correlated with ‘deal proneness’ (Lichtenstein, Netemeyer and Burton, 1991).
	Product Utility derived from IRP	Positively correlated with ‘deal proneness’ (Lichtenstein <i>et al.</i> , 1991).
	Dissonance Reduction	Positively correlated with ‘deal proneness’ and its associated behaviours (Lichtenstein <i>et al.</i> , 1991).
Purchase Behaviours	Shopping Enjoyment	Positively correlated with ‘deal proneness’ (Lichtenstein <i>et al.</i> , 1991).
	Brand Loyalty	Positively correlated with ‘deal proneness’ (Blattber and Neslin, 1990; Dodson, Alice and Brian, 1978; Lichtenstein <i>et al.</i> , 1990).
	Perceived control of using e-coupons, past experience and behaviour using e-coupons and return on invested time and effort	Significantly predicted ‘deal proneness’, which predicted the usage of coupons and their effectiveness (Chen and Lu, 2011).

---

While the effect of ‘deal proneness’ on decision-making is noteworthy, some caution is necessary. ‘Deal proneness’ greatly increases both positive associations and trust in promotional purchase outcomes (Laroche *et al.*, 2003). Consumers of higher ‘proneness’ have less regard for the associated redemption costs, both utilitarian and hedonistic, which typically act as safeguards in mitigating later dissatisfaction. This is because consumers perceive promotions to be an end in themselves, where gratification is granted from redemption (Prendergast, Poon, Tsang and Fan, 2008; Schindler, 1989). However, despite ‘deal proneness’ being well established, the theory is often criticised in that it only really describes promotional behaviour from a combination of demographic and personality style traits (Martínez and Montaner, 2006). To describe a behaviour as general as promotional purchasing a number of other factors need to be considered e.g. brand relationship, how and why consumers engage with a stimulus and the goal-orientation surrounding promotional purchasing. To date this sort of literature is sorely missing for more recently used promotions and so is an area that acknowledged by researchers as warranting immediate attention (Ahmetoglu, Fried, Dawes and Furnham, 2010).

Understanding how a consumer's psychology affects promotional decision making is warranted given that demographics, personality, cognitive thinking styles (e.g. intuition or cognition) and brand relationships are very strong predictors of purchasing in other purchase contexts (McGraw and Tetlock, 2005; Fox, Bartholomae and Lee, 2005; Bergkvist and Bech-Larsen, 2010). For instance, cognitively engaging with decisions has been shown to foster deeper, more thoughtful, evaluations of the choices available (Lichtenstein, Netemeyer and Burton, 1990). Brand relationships on the other hand are shown to be powerful emotive decision drivers that can veto the importance of typically important decision factors like price (Batra, Ahuvia and Bagozzi, 2012). However, many such findings have limited applicability in that they concern themselves with more general purchasing contexts rather than promotional ones. This is especially true regarding the individual promotional practices, for which some e.g. 'freebies' are yet to be considered in the context of consumer behaviour to any merit. The lack of research concerning consumer behaviour in promotional contexts is surprising given that consumer psychology is often used to describe how and why promotions can be so attractive (DeVecchio, 2005).

In sum, there is a significant research gap within the promotional literature that is yet to explore how psychological factors, such as the way consumers process prices, influence promotional decisions. This lack of consideration is especially true regarding the 'big four', with very few recent studies having even applied the theory of deal proneness to these practices. Therefore, this literary gap offers a unique opportunity to investigate current common promotions through a psychological lens. Exploring how other psychological dimensions like brand relationships or information processing affects promotional decision-making offers the opportunity to add some novel research to the growing promotional literature. Previous research has stressed the importance of this research stream, considering it to be vital in assessing the extent to which findings from the wider pricing and consumer literature can be applied to promotional contexts (Cialdini, Reno and Kallgren, 1990, Sinah, 1994; McGraw and Tetlock, 2005). It will also help to develop an understanding of how consumers can improve decision utility for promotional purchasing. **Chapter 2** will explore in more detail how consumer demography and personality can affect decision outcomes.

### **Summary of the Drivers of Promotional Purchasing**

In summary, the literature has made considerable progress in demonstrating the underlying factors associated with promotional practices, how they work and why they are so compelling. From this, a number of conclusions can be drawn.

First, the traditional economic theory that consumers act as rational agents has been consistently disproven (Poundstone, 2009). Numerous research studies and theories on decision bias have provided many explanations as to why and how decisions may not be as optimal as the decision agent intends. For each theory of bias, e.g. anchoring theory, there is considerable empirical evidence. Furthermore, it has been shown that psychological factors play an essential role in how consumers perceive, interact with and use promotions (Krishna *et al.*, 2002; Ailawadi and van Heerde, 2015; Winterich and Barone, 2011). ‘Deal proneness’, a behavioural manifestation of a combination of these biases, has been described as increasing consumer susceptibility to the influence of promotional ploys, particularly those offering little value for money, and promotional purchasing (Ailawadi *et al.*, 2014). Although there is little evidence to directly prove the impact of the theoretical biases in specific promotional contexts, support comes from the wealth of consumer literature that confirms their effect on pricing and purchasing contexts.

Second, the proven validity of these theories indicates that the ability to make a good, or ‘satisfactory’ purchase depends on a plethora of factors. ‘Deal proneness’ may be one critical element, yet as a trait, it reflects only a portion of the variance associated with decision bias. As previously indicated, a number of demographic and personality traits complete this feature. Since this concept is relatively undeveloped, especially concerning current promotional methods, there is likely to be a host of other factors that may need consideration to further develop our understanding of what it means to be deal prone. The review of the behavioural factors considered in the coupon literature (see Table 2) indicate that a wide range of variables, from brand relationships to the way that information is processed, should be examined (Clark and d’Ambrosio, 2008; Rerup, 2005). These will be discussed in depth in **Chapter 2**.

Finally, empirical evidence is yet to conclude which decision biases directly drive promotional effectiveness for each of the ‘big four’. The same holds true for ‘deal proneness’, with no existing research considering how the trait influences decisions in light of different promotional methods. An understanding of the particular traits or underlying theories that drive the effectiveness of a specific practice will be vital in ascertaining which practices pose the most significant implications to decision making. From this finding, we can begin to develop strategies that help consumers make more informed choices. Such findings will also help policymakers continue to improve and regulate pricing practices, such as those about to be discussed.

## 1.5 The 'Big Four' Promotional Practices

### 1.5.1 The word 'free' and BOGOF/BOGDIF variants

The word 'free' often refers to the practice of offering the consumer an additional item as part of the purchase and is one of the most commonly used promotional methods. Yet 'free' can materialise in a variety of forms: 'buy one get one free', 'buy two get a third free', 'free laptop with this phone deal', or 'kids go free'. While the word 'free' may indicate the receipt of a complimentary item, it can also be utilised as a powerful priming technique indicating value for money. In the literature, 'free' is most commonly referred to in the context of buy one get one free deals (BOGOF (Yeshin, 2006), which offer consumers a highly enticing reward of an additional, yet at times, unnecessary product (Pride and Ferrell, 2010).

BOGOF is a commonly adopted premium promotion (Lamb *et al.*, 2009; Pickton and Broderick, 2005; Shimp, 2010), so named because of the increased 'value for money' offered. These practices have been shown to influence purchasing behaviour by encouraging consumers to buy immediately (Belch and Belch, 2012), increase their consumption quantity and re-purchase more frequently (Shimp, 2010). Moreover, they encourage purchase decisions through explicit reward recognition, i.e. gaining a free product, which can significantly encourage purchasing and switching brands (Lamb, Hair, McDaniel, Boshoff, Terblanche, Elliott and Klopper, 2010). Given that this can apply to cases where the free item has little or no relevance to the purchased item, the literature debates whether it is necessary for the constituent items to be related whatsoever. The lack of agreement on this point, in the absence of empirical work (Ahmetoglu *et al.*, 2014), makes deciding upon future promotional BOGOF designs difficult (Spiegel, Benzion and Shavit, 2011).

Early work in this area began with a consideration of the theoretical differences between free and discount-based value perceptions (Ahmetoglu *et al.*, 2014). Significant differences were found, although these were mostly inconclusive (Krishna *et al.*, 2002) and prospect theory was causally attributed to explain these differences. This suggests that the provision of a free additional unit increases perceived 'gains', whereas normal price discounts could be classified as a minimisation of 'loss'. However, according to the prospect stipulation that 'losses loom larger than gains', it could be argued that discounts are preferable to consumers. Diamond and Sanyal (1990) dispute this, finding 'freebies' to be a preferable outcome, as they essentially offer 100% off a second item. Nevertheless, although \$0 might be easy to rationalise, in some scenarios free items offer consumers little value for

money and could even be wasteful. Naturally, this argument rests on the fact that monetary savings define ‘value for money’ when in fact inventory needs, or lack thereof, could be equally as important. Given the promotional context, however, this seems unlikely.

Further developing this concept, Sinha and Smith (2002) assessed ‘free’ transaction value on a Likert scale (a type of rating scale). Students were asked to give judgments for a variety of promotional frames, specifically a ‘BOGDIF’, a ‘buy two and get 50% off’, and a ‘50% off’ promotion. The 50% discount was most preferable, supporting the assumptions of prospect theory. However, BOGDIF had a higher transactional value, i.e. provided more utility, than both of the other offers. This confirms the assertions of prospect theory in that the ‘free’ unit is considered a ‘gain’. However, this study has two major limitations. Firstly, a small student sample is not representative of income-earning consumers who might consider a ‘free’ item as utilitarian as a discount. Spiegel *et al.*, (2011) confirm that a promotion's attractiveness may be influenced by the relationship between the products, i.e. whether these are substitutes or complements. This highlights that within practice effects can also be observed. Secondly, the comparisons in the original study were performed on a rudimentary scale and did not directly compare common discounting practices.

Having established that ‘freebies’ seem to provide value or gains over and above those of savings, inter-practice differences have been investigated. Another form of ‘free’ promotions, ‘buy one get another item free (BOGDIF)’ is as prominent in both the literature and practice as ‘BOGOF’. In ‘BOGDIF’, the second item is unrelated, but of nominal value, and some researchers identify this practice as more impactful to the utility of decision outcomes. Research that compares both practices generally considers the following type of issues: if L’Oreal shampoo (Grapefruit Scent, 500ml) is on BOGOF promotion along with all other scents, how much is each shampoo worth? Is it worth £3 or £1.50?, If a consumer then encounters a BOGDIF promotion in which they buy a bottle of shampoo and get a comb free for the same £3, how much is the comb worth?

Raghubir (2004a) showed that in BOGDIF situations, consumers view the ‘freebie’ as a cheap gift. As it is not directly comparable in either value or price to the focus product, consumers assume low production costs. Such assumptions reduce product demand and willingness to pay for the primary item when sold alone. Raghubir (2004b) also found that while discounted coupons are perceived as reliably providing transactional value, the use of an enticing introductory free item is not.

Interestingly, this reflects a general tendency of the consumer to inaccurately consider the true value of the free item (Spiegel *et al.*, 2011), particularly when products are non-complementary. Other studies, however, describe positive valuations of BOGDIF promotions (Chandran and Morwitz 2006; Darke and Chung, 2005; Nunes and Park 2003).

Darke and Chun (2005) show that in BOGDIF contexts, the value of the product may be equal to its full price and not adjusted for the 'freebie'. This does not appear to be the case in 'discounted' promotions. Thus, in the hypothetical BOGDIF situation 'Buy a mug for £4 and get a free pen set', the mug would be inaccurately attributed a price of £4, even though this price has been inflated to account for the pens. In explaining these effects, the authors suggest that the free gift acts to maintain quality by increasing the value of the deal relative to the promotional conditions. Should the overall BOGDIF price be significantly inflated, the deal may continue to inflate value perceptions, despite the actual value being sub-optimal. BOGDIF may, therefore, exert a robust biasing effect over regular promotions, although further work will be required to confirm the validity of these findings (Ahmetoglu *et al.*, 2014).

In an attempt to explain why value perceptions may increase in 'freebie' situations, Shampanier and Ariely (2006) suggest a significant emotive dimension. In a series of experiments, they tested the difference between framing the product as '£0', as opposed to free. In both cases, the promotion was attributed an inflated value in comparison to the control, demonstrating the biasing effect that both 'zero' and 'free' can have, but the effect associated with '£0' was greater. In an attempt to explain this, Ariely (2008) suggests that '£0 gives consumers an emotional charge', bearing in mind that this amounts to no recognisable monetary value. Again, these results are exploratory and require significant validation before any firm conclusions can be drawn.

In addition to 'free' framing effects, the complementary nature of the free product is noted as significant in determining value perceptions (Ahmetoglu *et al.*, 2014; Spiegel *et al.*, 2011). After all, if a consumer is actively seeking a particular product, the utility gained from receiving something unrelated and unwarranted should be minimal. However, given that consumers appear to prefer BOGDIF promotions compared to discounted ones, it seems that the 'free' element of the promotion acts as the decision trigger (Ariely, 2008; Shampanier and Ariely, 2006). This has great potential to bias decisions. As nothing was spent on the product 'free' promotions eliminate buyer's regret,

causing an initial and sometimes permanent over-valuation. This is further demonstrated by the fact that even minuscule advertised costs for the additional product, be it 1p or 2p, can diminish purchase intentions significantly (Shampanier *et al.*, 2007). The most likely reason for such effects is the lack of 'trade-offs' needed (Chen, Marmorstein, Tsiros and Rao, 2012). Some consumers are very averse to 'trade-offs', perceiving simple price fairness evaluations as a compromise between time and money. As free is an absolute price, is clear and requires no afterthought, such promotions are preferable.

The impact of 'freebies' on decision-making is among the least researched promotional practices (Ahmetoglu *et al.*, 2014), with very few studies having directly considered its consequences. In fact, no work has looked at the priming effect of 'free' or the contrast between BOGDIF and other specific promotional practices. Despite this, Palmeira and Srivastava (2013) suggest that even after considerable time periods, BOGDIF promotions do not necessarily decrease product valuations. The reason for this is that the free item should have little effect on the IRP but may still bias choice; 'freebies' promote highly intuitive, less researched, and thus less informed decisions (Chandran and Morwitz, 2006; Darke and Chung, 2005; Nunes and Park, 2003; Ahmetoglu *et al.*, 2014). A full understanding of how 'freebies' impact decision-making requires further research but is vital if consumer decisions are to be empowered and negative pricing practices limited. With BOGDIF promotions particularly prevalent in contemporary retail settings, understanding them from a consumer perspective is of considerable importance (OFT, 2010).

### **1.5.2 Drip Pricing**

Drip pricing is an increasingly popular practice in which a product's total price, which is often inflated, is segmented into smaller prices across the purchase process. No example of this technique is more prominent than *Ryanair's* '99p' flights, which is among the industry's most well-known marketing campaigns. Consumers are lured in with astoundingly low prices, before taxes, baggage charges, VAT and fuel surcharges are added on, so that the price rises from 99p to nearer £135. Despite such steep increases, consumers commonly seem to accept this, even if the total price is above that of a non-dripped RRP (Ayres and Nalebuff, 2003; Burman and Biswas, 2007; Kim and Kramer, 2006; Robbert and Roth, 2014). Despite some dissatisfaction with the process, its success lies with its convenience, with the time spent at the POS frequently encouraging the consumer to switch



their choices to other brands/products. By baiting consumers in with a lower, unrealistic price they are effectively duped into paying more.

With the detrimental effects of drip pricing on decision-making well documented, government bodies have already begun to limit and censor the practice's use (OFT, 2010; Robbert and Roth, 2014). While particularly prevalent when purchasing electronically (Shelanski, Farrell, Hanner, Metcalf, Sullivan, and Wendling, 2012), where the drip process can easily be controlled and conducted, some retailers have a similar in-store method. For instance, advertised prices in the US exclude all types of taxes, which in combination with card surcharges and currency conversion fees, mimics a dripped price process. This means that someone with \$100 who wants to spend \$99 on a hotel room will end up paying considerably more than their budget. Airlines, telecoms carriers, car renters and ticket vendors have all been associated with this method, and all are now increasingly expected to be transparent about their pricing methods (OFT, 2010; Robbert and Roth, 2014). However, despite many companies now clearly communicating the addition of extras, the fees are often cryptically presented as percentages that few consumers can calculate.

Despite the significant implications on consumer decision-making, drip pricing has only recently been considered in the literature (Robbert and Roth, 2014; Ahmetoglu *et al*, 2014). While it has been extensively applied to the pharmaceutical industry, few papers have considered it in the FMCG sector. In addition, studies from a behavioural perspective have only recently been undertaken. Morwitz *et al.*, (1998) were among the first to investigate the behavioural implications of price partitioning on purchase outcomes. They found evidence that partitioning prices increase purchase probability, despite the overall dripped price being higher than the RRP. While the original research related only to mobile phones, the results were later revalidated across retail products (Lee and Han, 2002), in service contexts (Ayres and Nalebuff, 2003), and for online auctions (Hossain and Morgan, 2006). It was consistently concluded that higher prices could be irrationally accepted by consumers (Ahmetoglu *et al.*, 2014), even in online contexts where switching is normally encouraged (Jensen, Kees, Burton and Turnipseed, 2003; Wolk and Spann, 2008).

Research into inter-practice typological differences, i.e. ascertaining the differences in sales and behaviour between dripped and partitioned prices, has shown some encouraging results. In contrast to drip pricing, where prices are revealed one by one, partitioning separates the total price but

presents all the individual prices together. Research comparing both practices suggests that consumers are as likely to fail to process partitioned prices as dripped ones (Ahmetoglu *et al.*, 2014). However, Bertini and Wathieu (2008) contend that this is highly dependent on the amount of information presented with each drip. Their argument rests on the idea that due to the practice in drip pricing of revealing prices individually, they can be followed more easily than when partitioned. It has also been suggested that the relevance of the surcharges in drip priced processes increases recall accuracy and promotes good decision-making at the POS (Kim, Zhang and Li, 2008). Thus, the perceived total price of an offer is lower under partitioned pricing, meaning that inflated total prices are accepted (Lee and Han, 2002; Morwitz *et al.*, 1998; Xia and Monroe, 2004). Although no conclusion has yet been agreed upon, in online contexts the dripped price for the base product is presented amongst 'optional' extras as seat selection maps and terms and conditions, which may further confuse the total price and increase total basket spend. Such 'additional' stimuli should be a priority consideration before a unanimous decision can be reached.

In addition to variations in the practice used, the size, number and order of partitioned prices significantly influences purchase intentions. The most prominent of these seems to be the size of the surcharge (Ahmetoglu *et al.*, 2014). For instance, a small but acceptable surcharge of around 6%, may bias consumer decisions by encouraging higher price satisfaction, purchase intentions and value perceptions. Together, these equate to reduced searching and switching behaviours which may have led the consumer to discover a better price elsewhere (Sheng, Bao and Pan, 2007; Xia and Monroe, 2004). Interestingly, a higher surcharge of around 12% decreased the acceptance and value of the dripped price, but left purchase intentions unaffected. Similarly, one larger surcharge received more favorable evaluations compared to two adding up to the same value (Xia and Monroe, 2004). However, this effect appears to be greatly moderated by the consumer-retailer relationship, with less trustworthy retailers only seeing benefits when fewer surcharges are presented (Carlson and Weathers, 2008). The presentation order of the overall price is also important, a higher base price increasing purchase intentions and value if placed before the surcharges (Xia and Monroe, 2004). Considerable validation of these concepts is needed before they can be verified.

A number of theoretical principles underlie the effectiveness of drip and partition pricing, including heuristics, anchoring, adjustment bias, mental accounting bias and prospect theory. Firstly,

consumers anchor on the base price, which may be the most expensive but is also perceived as holding the most value (Estelami 2003). This value is exaggerated in that ‘dripping’ the pricing can easily satisfy the common consumer desire for product customisation. Charging for ‘add-ons’, e.g. seat selection (Robbert and Roth, 2014), is a prime example of this. Through such customisations, consumers attribute a sense of their ‘identity’ to the product, which activates a value heuristic that rationalises the associated costs. Using such a heuristic has however been shown to bias decisions in most purchase contexts (Morwitz, Greenleaf, Shalev and Johnson, 2009) as many of the accepted surcharges are ‘non-transparent’, i.e. hidden from marketing campaigns, and difficult to compare. Because of this a naïve consumer can easily fall victim to accepting inflated prices, thereby making biased, uneconomical, decisions (Gabaix and Laibson, 2006).

After anchoring on the base price, consumers need to accurately summarise and adjust the total as and when the additional prices are experienced. However, adjustment theory suggests that this is problematic, given the general preference to maximise the convenience of a decision. Widely reported financial illiteracy of consumers is a further obstacle to the accurate adjustment needed and does not assist in the required mental accounting (Ayres and Nalebuff, 2003; Burman and Biswas, 2007). Particularly in partitioned pricing, there is a tendency for consumers to place importance only on the focal price (Thaler, 1985) and to assign lower values to taxes and surcharges even though they heighten the overall cost (Morwitz *et al.*, 2009). Such a biased perception of the additional charges could also be attributed to prospect theory, which suggests that each individual price could be perceived as a minimisation of loss (Spiegel *et al.*, 2011). The number of small potential losses may combine, rendering the total price favourable in comparison to an ‘un-dripped’ one (Ahmetoglu *et al.*, 2014). Again, this finding is yet to be universally validated.

Despite retailers benefiting from the potential acceptance of higher prices from the dripped process, these effects are subject to numerous consumer moderators (Kim and Kramer 2006; Burman and Biswas, 2007). For example, the role of personality and need for cognition are particularly important, where being conscientious and cognitively involved in the decision process allowing the consumer to accurately conduct a cost-benefit analysis for drip priced items (Sirgy *et al.*, 2015). The role of the cost-benefit evaluation is important as the research finds dripped prices to only lead to higher purchase intentions and value perceptions if the perceived consumption utility of the product is high (Hamilton and Srivastava, 2008). In the context of flights, Ryanair flights are seen as budget and

thus offer little utility from a quality, comfort or service perspective. In contrast, British Airways flights offer considerable higher utility on these fronts, which in turn makes the acceptance of a higher than normal dripped price likely to be accepted. In effect then, the effectiveness of drip pricing is reliant on suitable price-quality associations (Völckner, Rühle and Spann, 2012), and surcharges priced in accordance with both economic and subjective value (Sheng *et al.*, 2007). While both cognitive information processing and conscientiousness can improve the ability to evaluate prices, they have not yet been directly investigated in drip pricing contexts.

After a review of the literature, three general conclusions about drip pricing can be drawn. Firstly, it increases purchase probability even when the overall price is considerably higher than the total RRP (Gabaix and Laibson, 2006). This biases purchase decisions by using time and cost factors to increase the likelihood of price acceptance (Ahmetoglu *et al.*, 2014). Secondly, the practice's effectiveness is determined by the design of the partitioned prices, the method by which consumers experience them and whether the surcharges are comparable (Burman and Biswas, 2007; Xia and Monroe, 2004). Lastly, the literature consistently points to adjustment theory and financial literacy as strong psychological moderators (Grubb, 2015). When combined, these design and theoretical elements produce an effective practice, which works in favour of the retailer.

Overall, there has been considerable progress in uncovering the underlying dimensions that drive drip pricing's effectiveness. While there is debate over the differences between price separation methods, their effect in inflating purchase intentions is equally pronounced (e.g. Bertini, Ofek and Ariely, 2009; Bertini and Wathieu, 2008). That said, very few studies have explicitly considered the broader inter-personal elements or provided valid conclusions on their moderating effect. It is still unclear how the influence of intuition compared to cognitive-based reasoning in drip priced decision-making remains unclear, along with, the roles of personality and consumer experience in determining these effects. Future research also needs to address the impact of drip pricing on purchase utility in a direct sense, and not merely infer this from skewed value perceptions. Additionally, a direct comparison between methods would be useful.

### 1.5.3 Value-Based Pricing

Value-based pricing takes a variety of forms. At the most basic level, it is the practice of pricing a product per its value, be it subjective and/or economic. Subjective value drivers can include social desirability, personal utility, group norms, brand power or exclusivity (Degeratu *et al.*, 2000; Seth and Parvatlyar, 1995; Sirgy *et al.*, 2015). For example, Apple bases the prices for its products not only on innovation but the social desirability and personal impact it has to its consumers (e.g. making them feel ‘cool’ or ‘part of the social circle’). Despite these factors being influential for all promotional practices, they can be used on their own as price setting tools. Consequently, many forms of ‘value-based’ pricing exist. One example is ‘skimmed luxury pricing’, in which the price of a product is comparative to luxurious market leaders, and it is marketed as unique or scarce. For many of these products, basic functionality is similar to a regular item and is differentiated only by a few subjective factors. For example, a brand name is nothing more than letters that are socially and emotively associated with a reputation defined entirely by marketing and consumers. Despite offering no real value to the purchase in question, a brand name can vastly increase a product’s perceived value (Yiridoe *et al.*, 2005).

In contrast, economic pricing, sometimes called ‘reference pricing’, draws consumer attention towards a price that is discounted from the RRP (López-Casasnovas and Puig-Junoy, 2000). Not to be confused with internal reference prices, these externally presented prices (ERPs) communicate ‘normal’ or ‘undiscounted’ prices in conjunction with a discounted one. For example, ‘Was £99, get it now for £50’ is a typical illustration of this method. As with drip pricing, the fundamental heuristic of influence is that of anchoring. Specifically, the original RRP is used as an anchor to create a perception of value (Northcraft and Neale, 1987; Furnham and Boo, 2011). The literature, which has focused upon the effect of anchoring in this context, suggests three types of reference pricing methods (Ahmetoglu *et al.*, 2014; López-Casasnovas and Puig-Junoy, 2000). Each is defined by the relative price to which the promoted one is compared, specifically: the price charged by similar retailers, the RRP which the retailer would usually charge, or the manufacturer's suggested RRP. These methods will now be discussed further.

In an early work, Blair and Landon (1981) demonstrated reference effects on price and saving perceptions for electrical goods. Products with no reference (RRP \$44.95) were compared to those with a reference (RRP \$69.95, now \$44.95). Some consumers believed they were getting up to

75% off and readily indicated intent to purchase, when in fact the reference RRP had been fabricated. While only a small study, it highlights consumers' resoundingly misplaced trust in advertised prices. Furthermore, the ecological validity of these findings should be noted. As the products in question were by no means new, consumers should have used previous experience and IRPs as part of their evaluations. The significant increase in saving perceptions suggests either that IRPs were not used, or they were in line with what was advertised. In explaining this, Darke and Chun (2005) suggest that, irrationally, consumers trust the discounted price to be accurate, rather than the RRP.

Lichtenstein and Bearden (1988) went on to examine the relative influence of reference prices on purchases when the manufacturer's suggested price, but not that of the suppliers, was provided. Consumers were exposed to a car advertisement before being asked to estimate the undiscounted price that the supplier would charge. A price difference condition was used in which more substantial price differences ('Was \$8215, now \$7272') were compared with lower ('Was \$7414, now \$7272'). This price manipulation had a considerable effect on consumer valuations, the high condition increasing perceived value by 10.6%, compared to 1.5%. Moreover, the actual reference price was shown to account for 27% of the variance in the valuation. This research demonstrates three main points. Firstly, using a higher reference price leads to greater value perceptions of the product. To the consumer, the higher reference infers a greater price saving despite the actual suggested price being the same in both conditions. Therefore, using an inflated reference price leads to subjectively high perceptions of savings. Secondly, the reference accounted for a significant proportion of the variance in the decision, thereby supporting the direct relationship between the price framing method and decision. Lastly, different types of price references have equally biasing effects on decision outcomes. In this case, using the manufacturer's suggested price had the same effect as using the RRP.

Urbany, Bearden and Weilbaker (1988) confirmed these views by reporting that product valuations increase linearly with the size of the reference price. This relationship remains consistent even when consumers mistrust the price (Blair and Landon, 1981; Urbany *et al.*, 1988). Furthermore, evidence has shown that the same effects can be found for exaggerated reference prices, which in some cases increases value perceptions above that of real RRPs (Biswas, 1992; Biswas and Blair, 1991; Burton, Lichtenstein and Herr, 1993; Lichtenstein *et al.*, 1991; Wolk and Spann, 2008). Although an increase in price expectations of up to 200% has been reported (Kopalle

and Lindsey-Mullikin, 2003), it should be borne in mind that the actual monetary price differences represented in these cases are often small. Overall, this work indicates that the size and presence of the anchored reference price may have a significant effect on purchase outcomes.

In an attempt to combine the findings from these studies, a meta-analysis was conducted. In 72% of studies, reference pricing significantly encouraged transactional value perceptions and purchase intentions (Biswas, Wilson and Licata, 1993). This effect is so prominent that subsequently, researchers have explicitly stated that reference prices undoubtedly work well in retail contexts (Lichtenstein, 2005, p. 358). Biswas *et al.* (1990) suggest that this is due to both design and psychological dimensions, although research in this topic has not yet considered these in depth. The inflation of value perceptions has been consistently attributed to anchoring and naive trust in the RRP presented (Alford and Engelland, 2000; Blair, Harris and Monroe, 2002; Chandrashekar and Grewal, 2006; Chernev and Wheeler, 2003; Kopalle and Lindsey-Mullikin, 2003; Trifts and Häubl, 2003; Wolk and Spann, 2008). There seems to be a rationale for exploring the power of other behavioural factors to influence the reference price effects already demonstrated.

Factors that may have a potential influence include price knowledge. Specifically, an understanding of market representative prices aids in accurately assessing the fairness of the advertised RRP. While some work shows that consumer experience does not moderate the acceptance of value-priced products (Liefeld and Heslop, 1985), recent research indicates a significant effect (Blair *et al.*, 2002; Lichtenstein and Bearden, 1989). While this is partially attributed to methodological inconsistencies and sample characteristics (e.g. deal proneness), a further possible link has been made with IRPs (Kinard *et al.*, 2013; Laroche *et al.*, 2003). Brand familiarity reduces skewed perceptions of value when purchasing essential, frequently encountered products (Biswas and Blair, 1991; Nottingham University Business School, 2005). As these products tend to have realistic IRPs, these are more likely to indicate the 'fairness' of the advertised RRPs.

From a theoretical perspective, reference price effects have been attributed to prospect theory, convenience and anchoring. Given that value-based pricing provides consumers with identifiable value by reducing monetary loss, prospect theory explains why acceptance of such deals is so universal. This is despite the possibility of being deceived by fabricated RRPs, and in turn, this suggests that the theory of convenience is also relevant (de Bussy, Pitt, Low, Murgolo-Poore and Samouel, 2015; Jiang, Yang

and Jun, 2013). As consumers tend to choose the most straightforward course of action, reference pricing makes purchase decisions more convenient by minimizing trade-offs and encouraging perceptions of utility. Accepting reference priced products is a highly convenient option, as savings are indicated and require no evaluation (Blair *et al.*, 2002).

Belsky and Golivich (1999) additionally suggest that consumers are particularly prone to confirmation bias due to anchoring and the subsequent reduction in searching. Confirmation bias refers to the tendency to interpret information in a way that confirms one's preconceptions (Klayman, 1995; Nickerson, 1998). In this context, consumers should search for IRPs to affirm the RRP's 'fairness', but due to strong anchoring effects, they may only perceive a potential loss of value for money. This effect can be exacerbated by brand loyalty, which encourages hedonistic, rather than utilitarian, decision-making (Coleman, de Chernatony and Christodoulides, 2015; Strizhakova *et al.*, 2011). As an anchoring effect was implicated in over 50% of the data considered by the previously discussed meta-analysis (Biswas *et al.*, 1993), and with similar effects also being observed in online situations (Wolk and Spann, 2008), it seems likely that anchoring on an RRP will have a significant impact on decision-making.

Although the literature on reference pricing is abundant, the same cannot be said about the relationship between pricing and 'subjective value'. Understanding this type of value pricing is important as many retailers now inflate the price of pseudo-innovations, relying on a perceived subjective desirability to justify this. Apple, for example, has gained significant market power in the mobile telecoms industry, by defining their products as 'socially desirable' and 'innovative'. Now that consumers also perceive Apple in this way, the company can charge more for their products, due to these subjective norms. The same is true for perceived luxury or 'scarce' goods that are perceived as luxury or 'scarce'. Here, value perceptions are inflated by limiting free choice and increasing the chance of loss. Both scarcity and luxuriousness have been shown to bias purchase utility, even when claims are inflated and fabricated (Shah *et al.*, 2015; Wu, Lu, Wu and Fu, 2012). Since perceptions of brands are in a constant state of flux, it is difficult for researchers to obtain a consistent measure of subjective value across a population. This could be a significant explanation of the present research gap.



The theory of brand identification is considered to be an excellent subjective measure of product value (Phillips, McQuarrie and Griffin, 2014; Tuškej, Golob and Podnar, 2013). Brand identification can be described as a consumers' self-identification with a product on a psychological and social level. Psychologically identifying with a brand involves consumers aligning the brand's values with their own. One part of this alignment concerns the social implications of identifying with the brand, e.g. becoming part of a social group. Brand identification strongly defines how a brand's subjective value is perceived. In fact, many findings show that strong identification promotes purchasing even when the purchase offers little economic value (Lam, Ahearne, Mullins, Hayati and Schillewaert, 2013; Lin and Sung, 2014; Tanford, Raab and Kim, 2012).

Underwood and Foley (2015) found that two aspects of brand identification influence purchase motivations as a result of brand evaluations. These are belief strength and purchase involvement. The former refers to the personal beliefs, values and motivators that make up a personal norm. Strong beliefs may be applied to a situation along with decision involvement, i.e. how much one engages with a decision. Together, these two factors combine to define the behaviours associated with brand identification. Moreover, both have been found to be significant components in increasing the motivation to purchase, sometimes with little regard to cost (Lin and Sung, 2014; Tanford *et al.*, 2012). It, therefore, seems likely that the theory of brand identification may be helpful in understanding promotional purchasing. As it shows that some purchase decisions may arise more as the result of emotive than utilitarian drivers, consideration needs to be given as to how this defines utility.

There have also been some attempts to understand purchase 'value' through the social implications a purchase affords. One of the factors most frequently considered is social desirability (Luo, 2005; Sirgy *et al.*, 2015). This can be described as the desirability of a product among social groups and the potential to become more integrated into a social group if a purchase is made. Consumers often make decisions based on the social value of a product, e.g. 'owning an iPhone is cool and affords me social status'. However, there are a number of common social attribution biases, such as group norms and majority influences (Luo, 2005), that can largely dictate the social desirability and utility of decisions (Slama and Tashchian, 1985). Sirgy *et al.* (2015) hypothesised that socially orientated evaluations influence four phases of purchasing: social consequences before purchasing (envy, desirability and uniqueness), purchasing with little engagement, purchase

completion, and post-purchase. The results of the study show that purchase motivation is significantly affected by social desirability at the completion and post-purchase stages. This indicates that consumer decisions are motivated by social desirability at the checkout and not necessarily when the item is first encountered. Whether value perceptions differ as a function of social desirability is yet to be fully established, making it difficult to determine how these factors influence promotion design or affect promotional decisions.

Subjective value perceptions have potentially considerable implications for consumer purchasing. However, as few studies have been conducted, the extent to which subjective value drivers are used in real pricing scenarios have yet to be ascertained. If value-based pricing does indeed consider social desirability and identification with a brand, then the currently available research is valid. However, because this research is mainly exploratory, considerable work is still needed, especially if retailers in the future intend to set prices based on subjective value. Some additional factors that warrant investigation include colour, brand familiarity and design. In the consumer literature, these decision factors have previously been considered unimportant when compared to price or quality. However, as price differences between retailers diminish, research on these so-called 'peripheral' factors have seen an increase. To date, all three of these factors have been shown to impact the subjective value of a product, even increasing purchasing intentions (Shiv and Fedorikhin, 1999). This is despite the fact that aspects such as design and colour do not appear high up in the hierarchy of essential decision drivers. These novel findings strongly suggest that subjective value plays an ever-increasing role in defining utility, along with shaping the decision of what to purchase and the perception of prices.

While the literature on subjective pricing practices is still only suggestive, that on reference pricing is far more conclusive. Specifically, research indicates that consumers anchor and trust the advertised RRP when evaluating the magnitude of the discount. Because of this, consumers can easily be deceived into thinking they are getting a discount if the RRP is fabricated and the discounted price remains comparable to the real RRP in the market. To summarise, research has shown that identifying with a brand and gaining social status from purchasing may drive value perceptions. Other subjectively important factors, such as colour and design may also impact decision outcomes, by increasing value perceptions despite no utilitarian benefit. There are valid grounds to suggest that pricing based on subjective or economic values are powerful drivers of value perceptions and

intended purchasing. Since consumers recognise this value and seem to place a biased weight on it, there are likely to be instances where these value-drivers cause other factors that confer true utility to be ignored. Considerable work is still needed to reach conclusions about either of the value-based pricing methods, as to date sample sizes have been small and effect sizes weak. This thesis aims to address this gap.

#### **1.5.4 Bundling Practices**

Bundling is a promotional method in which products are grouped together to shift volume and invoke perceptions of savings (Linthorst, Telgen and Schotanus, 2008; Manning and Sprott, 2007). Typical examples of bundling include offers such as ‘3 for £4’ or ‘buy two, get one half price’. For each of these variations, the promotion aims to increase the quantity bought by offering a discount for the bulk buy. Defining bundling in the literature, Stremersch and Tellis (2002) suggest it is simply the sale of two or more products together, where a separate market for each already exists. Unlike other methods, bundling is distinct in that products are not necessarily related to each other. For example, a bundle can comprise three or four entirely different items, all for one reduced price. Because the promotion offers both a discount and quantity, it, like BOGOF, can be viewed as a premium practice (Du Plessis, Cook, Van Heerden, Van Rooyen, Mulder, Du Plessis, Franck and Muir 2010; Lamb *et al.*, 2010).

Three bundling practices are generally thought to exist. The first is ‘pure bundling’, in which a retailer offers the constituent products solely as part of the bundle. These products are not to be found in any other in-store contexts. The second is ‘volume bundling’, expressed as ‘2 for 3’, ‘buy one, get one half price’ or ‘3 for £8’, the sole aim of which is to increase sales of a particular unit, brand, or product group. The third, and probably the most common, method is ‘comparative, or mixed, bundles’. ‘Meal deals’ are a perfect example of this, where the bundle comprises unrelated but stocked products.

The literature on bundling is generally well established, especially in retail contexts (Ahmetoglu *et al.*, 2014). Research on this topic is mostly split into two areas. One branch examines the effect of the bundle on consumer decision making, while the other evaluates the influence of the constituent product’s prices. The aim is to ascertain which product, type or position in the bundle is most influential in encouraging purchase intentions (Janiszewski and Marcus, 2004; Yadav and

Monroe, 1993). Volume and mixed bundles have received the most attention, but while such research is typically thought of as consumer-focused, the literature suggests that research from the retailer's perspective is more abundant (Linthorst *et al.*, 2008).

Research from the retailer's perspective has predominantly focused on the marketing and strategic effectiveness of bundles (Bakos and Brynjolfsson, 2000). Blattberg and Neslin (1990) used an econometric approach, controlling for sale and marketing variables, to show that bundles increased sales and value perception by over 12%. This was true across seven brands and three product categories. To confirm this, Wansink, Kent and Hoch (1998) conducted a large-scale study across 86 stores, investigating the effectiveness of bundling in sales across 13 product types. In 69% of cases, the promotions increased sales above single-unit promotions. More specifically, bundles such as '4 for £2' were compared against single-unit promotions such as '50p each'. Single-unit promotions increased sales by 125%, while bundles increased them by 165%. This would suggest that bundling has a more significant effect on purchase intentions than other promotions. Given such findings, bundling has often been considered a barrier to market entry. Offering premium value to consumers that few smaller retailers can mimic, bundling is a reliable revenue earner for larger retailers (e.g. Carlton and Waldman, 2002; Nalebuff, 2004). Yet, Stremersch and Tellis (2002) state that no framework exists that can adequately explain the features of a satisfactory, effective, bundle.

In an attempt to utilise decision theories to explain the efficacy of bundles, researchers have applied behavioural explanations (Wansink, Kent and Hoch, 1998). Mabert and Schoeherr (2001) were among the first to consider the behavioural moderators of consumer value perceptions in bundling contexts. Bundling significantly increases the perceived value of the constituent products, with complimentary constituent items indicative of higher value (Beall *et al.*, 2003). As confirmed by Jap (2002), there is also a positive relationship between value and the number of items in a promotion. This is attributed to consumers focusing on the reward of quantity instead of specific price information (Alba, Mela, Shimp and Urbany, 1999). Volume bundling appears to be the most influential of the bundling methods at promoting value for money perceptions.

Manning and Sprott (2007) also confirm the increase in bundling-related sales, although the effect was only reported to be significant for the largest unit bundles (i.e. 8 vs 4 or 2). Importantly, unlike in previous studies, these effects did not rely on the presence of a single-

unit price. This suggests that consumers do not rely on single-unit prices in their evaluations, but on the perceived savings that bundling can offer (Steven, McGoldrick and Mitchell, 2003). While still not providing a rationale for an effective bundling framework, more recent research has focused on bundles in reverse auctions, where sellers, not buyers, bid for contracts. The findings here run in parallel with those of Manning and Sprott (2007), suggesting that increases in the number of bundles or changes in bundle composition (Arnold *et al.*, 2005) further increase price and value perceptions. Schoenherr and Mabert (2008) further validate these effects but suggest that the utility perceptions significantly increase as a function of bundle size, so that the more items in the bundle, the more significant the effect. Taken together, it seems conclusive that while the perceived value of bundles is strong, the bundle-value heuristic is even stronger when considering bundle size.

Consolidating research on mixed-bundles, Foubert and Gijbrecchts (2007) used a large sample of 1181 grocery products across 17 brands and 8 stores. They found that offering a bundled promotion increased the likelihood of switching to the bundled products, and the effect was stronger than for other promotions. This was the case even when savings were identical. More interestingly, it was not necessarily the promise of reward that caused switching, but the mere communication of the promotion itself. Furthermore, when the consumer did not purchase enough of the product to qualify for the discount, they would still switch to the promoted items. This suggests that even when no savings are obtained, or for that matter, even if incurring a loss, consumers opt for the promotion. Running counter to the principles of prospect theory, bundling appears to have a significant biasing effect, above that of other promotional methods.

In an attempt to confirm the potentially detrimental effects of bundling on decision-making, Johnson, Herrmann and Bauer (1999) conducted evaluative automobile experiments, in which the bundling methodology varied. It was found that product valuations increased as a function of the complexity of the bundle and price information, even when bundles offering no savings. Additional studies have also found that consumers infer savings from bundles, even when none exist (Heeler *et al.*, 2007; Nguyen, Heeler and Buff, 2009). In another study, Arora (2008) used a brochure of teeth-whitening products, where prices were either presented individually or bundled. Using measurements of consumer intentions (purchase likelihood) and attitudes (desire), bundling increased purchase intentions above other promotions. Thus, decisions are biased by these practices, perhaps more so than for other promotions.

Theoretical explanations of the sometimes-skewed perceptions associated with bundling are based on anchoring, adjustment theory and convenience. As with other practices, consumers anchor on the price of the focal item, inaccurately calculating and adjusting cost and value perceptions of constituent items. Yandav (1994) showed that consumers consider items in decreasing order of perceived importance, making inaccurate adjustments when forming their promotional evaluation. When faced with an excellent anchor, consumers adjust the overall bundle evaluation downward, and upwards when the anchor is poor. Furthermore, the convenience associated with bundled purchases is detrimental to achieving accurate value perceptions. Andrews, Benedicktus and Brady (2010) examined bundling in the telecommunications industry, looking specifically at the effects of bundling incentives (e.g. one-bill convenience and cost savings) on value perceptions, searching behaviours and switching. Bundling increased value and switching, but reduced searches. This was attributed to the convenience of having one bill; adding extra savings had no effect on any of the behaviours under study. Consumers can be influenced into purchasing from a given retailer, not only via savings but through convenience.

In summary, offering bundles to consumers can encourage them to repurchase and to perceive savings, even when none exist. The value association of bundling is so strong that it can increase switching, even when consumers do not fulfil the requirements of the whole discount. Thus, they may incur a direct loss, and their purchase decisions become ineffective. The consistency of these findings is clear; valueless bundles appear particularly detrimental to decision-making. Again though, there is no work comparing bundling and its effects to other specific practices. An understanding of this will be useful if consumers are to comprehend their biases in retail situations.

## 1.6 General Conclusions, Directions and Scope

### 1.6.1 Promotion-Based Conclusions

Among the broader consumer and pricing literature, the topic of promotions is largely unexplored (Ahmetoglu *et al.*, 2014). Little is known about how promotions compare to one another, even less on how each directly affects the overall utility of a consumer's decision. That said, the general decision literature shows that there are some underlying biases and theoretical models driving promotional decisions (Poundstone, 2009). Overall, there appears to be a negative relationship between promotions and decision utility. The existing evidence suggests that consumers can easily be enticed by promotions to buy higher quantities, even if there are no savings to be had (Foubert and Gijbrecchts, 2007). However, because this conclusion is based on novel studies and an unrepresentative student sample, this hypothesis has not been conclusively proved, particularly as only reference pricing and bundling practices have explicitly and consistently shown negative effects. Moreover, none of these studies were designed to specifically investigate decision utility and their findings have only indicated biased decisions rather than proving them.

In the existing research, bundling has been the most consistently documented practice to have an adverse effect on decision utility. Such promotions increase consumer purchasing to a greater extent than single unit promotions offering the same or a more substantial discount. The use of 'volume' in a promotions frame appears to encourage a biased increase in purchase frequency and quantity even if the volume criteria are not fulfilled. Such purchasing can lead to overspending per unit and could therefore be considered biased if saving is the key driving factor of the purchase. This effect seems substantial, with multiple studies reporting that bundles offering no inherent value or price-saving are more readily accepted than the same products presented individually.

BOGDIF promotions seem to increase the likelihood of purchasing with little regard for the single unit cost of the primary item. One explanation for this is that the 'free' item is a highly sought after measurable reward that is seemingly guaranteed. As a result, the presence of this 'free' component may increase the possibility that consumers will ignore the actual promotion. Moreover, consumers do not seem to accurately evaluate the single unit price of each item which can be inflated to account for the free item. The effects in BOGDIF promotions are likely to be exacerbated given that the additional item's price can be fully accounted for in the total and is by itself incomparable to the primary item. The longitudinal effects of this promotion on decision-making and IRPs are unclear.

Drip priced promotions have a particularly strong effect on the utility of purchase decisions. They lure consumers in with initially low, attractive, prices only to increase these slowly during the purchase process. As involvement increases at each stage of the purchase process, consumers perceive they have more to lose by switching and so become more likely to purchase. Moreover, consumers appear to have an acute inability to adjust for price increments, probably due to low financial literacy. In a drip pricing context, this inability can be particularly detrimental to decision utility given that there are often multiple price adjustments required for the consumer to evaluate price fairness accurately. Making judgments on fairness is further hindered by the cognitive complexity of understanding and validating dripped prices, as many of the optional charges are axiomatic price units, against which consumers have few IRPs (Vaidyanathan *et al.*, 2000). Varying the prices of these optional units, combined with engaging consumers in lengthy purchase processes, increases purchase intentions despite overall higher prices.

Value-based pricing determines price as a function of either personal or monetary value. While little research has focused on the latter, the literature suggests that consumers anchor on the RRP and even when this is artificially inflated, they perceive savings. The effect of this promotion is consistent, as it always leads to a perception of value even when the consumer does not trust the retailer. This is thought to be due to strong anchoring effects, with brand loyalty increasing consumer trust of the RRP presented. Retailers can, therefore, increase prices in anticipation of the spike in sales following the subsequent promotion, allowing them to use the inflated RRP as the price reference in the promotion. Using a supplier's suggested RRP seems to yield similar outcomes (Urbany *et al.*, 19808; Lichtenstein *et al.*, 1991; Wolk and Spann, 2008).

### **1.6.2 Research Gaps and Directions**

The literature review has highlighted many vital theories that explain how moderators can affect the way in which consumers purchase promotions. Much of the presented research is still unconfirmed, and the review highlights that considerable work is still needed to address this. The existing research provides promising insights that can be used to improve fair pricing practices. For instance, the literature on drip pricing was a central motive for the Australian government's policy to restrict the practice's use. As current promotional research is applicable across a vast multi-cultural audience, countries, where promotional practices are less regulated, could benefit greatly from the insights it provides. However, although the practical considerations of each promotional method are



undoubtedly important, research has yet to establish which of the specific promotional practices has the most significant impact on the decision-making process. Furthermore, there is no consistent examination of the way in which psychological factors can affect this comparison, nor how it influences more extensive promotional purchasing. Despite the considerable body of consumer research dedicated to explaining how and why consumers make purchase choices and decisions, these gaps provide two opportunities to bring some original research to the field. Each opportunity can be framed as a question which this thesis will subsequently aim to answer:

### **1) Which of the promotional practices is the most detrimental to purchase utility?**

While each of the ‘big four’ practices have been considered to a varying degree by the literature, no work has directly compared the effect of each of these practices on decision-making. Although retailers naturally consider that sales data supports the effectiveness of each promotional type, little is known about how each practice impacts the utility of the decisions made. A direct comparison will illuminate which practice-specific biases are particularly detrimental to decision-making and indicate which practices need further regulation to improve fair pricing. By comparing each practice not only to one another but to a controlled, non-promotional, condition, the influence of each promotion on decision utility can be determined as a deviation from the control. Organisations will gain much from these findings by understanding how to market their products more effectively. However, with growing government interest in the regulation of some of these practices due to their more negative effects, it seems increasingly important that this research is considered from a consumer perspective. Ascertaining which, if any, method is more biased can promote fair-trading practices, educated consumers and also provide avenues for future research.

To undertake research of this sort, promotional practices need to be examined across investigations as consistently as possible, with the only differing aspect being the constituent promotional items. To retain consistency, control factors would also need to be used. These will include item price ranges, the type of retailer, currency, brand usage and colouring. In the absence of such consistency, variations would exist that could inevitably limit the overall findings to even more specific purchase contexts. Given the importance of controlling for these factors, the upcoming research will need to set some controls of its own including a consistent purchase context that is relatable to all consumers. In order to make the upcoming research applicable to the wider population of consumers, it seems prudent to use a purchase context that is salient. As such, the focus of this thesis will be grocery

purchases bought from a market mid-priced hyper-store, in which both essential and non-essential goods can be found. Given the UK sample, Tesco Extra, the largest grocery retailer in the UK was selected. Using GBP (£) as the currency, the promotional items that were going to be used had a maximum value of £100 and consisted only of essential and relatively salient goods. To counteract any potential brand-related preferences, no national brands were used. RRP for products were average prices taken from the top ten grocery retailers in the UK (*see* Appendix 1 for a list).

RRPs were introduced to consumers through a product news infomercial. The colour schemes used to create the infomercial were predominantly red, green and yellow, as this is not used by any UK grocery brand. Colouring schemes for promotional messages were a market-standard red and white on a solid colour background and the font was consistently Arial Black. Promotions and the items they included were presented, along with the corresponding purchase intentions measure, for a maximum of 30 seconds. This is the average time that the literature suggests consumers require to engage with products (Hoyer, 1984; Park, Iyer and Smith, 1989; Kahneman, 2003). Reflecting what has previously been discussed, promotions were framed appropriately (*see* Appendix 2)

## **2) Which psychological factors significantly determine the decision utility of a promotional method and how does this differ across promotional practices?**

The literature has also implied that promotional decisions can be biased by a variety of consumer characteristics and behaviours. In fact, almost all of the core theories presented in this review revolve around and acknowledge the importance of a consumer's psychology. Firstly, the rational choice theory is rejected in favour of the theory of bounded rationality because consumer decisions are constrained by their psychology and the decision environment. This theory notes that a consumer's cognitive resources dictate what decision is made. Secondly, the theories of reasoned action and planned behaviour directly propose that the way in which a decision maker internalises information views the social environment and is motivated, ultimately determines the decision action. The importance of motivation and goal-orientation of individual consumers on a personal and psychological level is also noted as central to the consumer-centric models developed from the TPB. Sinah's (1994) model, the EKB (Engel, Kollat, and Blackwell, 1973) and Einhorn and Hogarth's (1981) proposed decision evaluation model are all examples of this, each proposing that consumers go through a number of psychologically driven stages in order to make a decision. Whether these stages reflect work from the cognitive psychology literature the pricing literature, or the decision literature,

each model is resoundingly psychologically driven. Moreover, the newest consumer models of decision making clearly suggest that decisions can be best explained through constructing and reasoning the purchase, both of which are determined by the way in which a consumer views the environment, determines their goals and views the importance of personal over functional utility.

While the effect of a decision maker's psychology has been touched upon in the general consumer literature, very little work has considered the influence of a consumer's psychology in promotional contexts. The research that does exist concerns itself with the theory of deal proneness and focuses more on the effect of specific demographic and personality traits in predicting promotional effectiveness rather than decision utility. For instance, the consumer literature has demonstrated the possibility that psychological factors such as deal proneness can increase sales, but not quantifiably that the decisions can be biased. Moreover, research showing that demographics, psychographics, information processing style and IRPs can all influence the way consumers perceive value and evaluate the 'fairness' of a price are examples of such findings (Ahmetoglu *et al.*, 2014; Krishna, Briesch, Lehmann and Yuan, 2006; Lowe and Alpert, 2010; Mazumdar *et al.*, 2005; Mehmet, 2012). However, despite the literature insinuating that these factors have the potential to bias promotional decisions, this has not yet been proved in the context of specific promotional practices.

Since there is a clear link between a decision agent's psychology and their decision-making practices this relationship is worth exploring in more depth. An understanding of which psychological mechanisms underlie promotional engagement and purchasing will help to improve both consumer empowerment and our understanding of consumer behaviour. To date, the pricing policies used to empower decision-making do so from an environmental perspective. For example, by restricting price framing technique rather than helping consumers to become more financially literate. In the long run, improving the latter may increase consumer decision utility while allowing retailers to continue pricing in ways that they see fit. Furthermore, little conclusive evidence supports the generalisations made from consumer decision contexts to promotional ones. Based on this research gap, **Chapter 2** will begin by recognising how these general findings could apply to the promotional literature by comparing the findings with qualitative data from expert interviews.



# CHAPTER 2 – CONSUMER PSYCHOLOGY AND DECISION MAKING

## 2.1 Overview

As was shown in **Chapter 1**, there are a variety of frameworks used to describe the processes involved in consumer decision making, e.g. the EKB (Engel, Kollat, and Blackwell, 1973) or WAM framework (Kahneman and Tversky, 1982). Although each framework offers a different explanation as to how and why an option is chosen, they all consider the decision through econometric means. However, the reliance on understanding decision-making from strictly economic terms is increasingly seen as a flaw. Late in **Chapter 1**, for instance, it was shown that merely using the word 'bargain' could significantly impact the decision.

Although the cognitive decision models can account for such behaviour, by stating that the decision is fully weighted on a price and/or value factor, there should be no differences in decision utility between similar practices. The logical explanation to this is that there are significant behavioural dimensions at play that guide the decision process. This notion is supported in the promotional literature which shows that decision biases drive promotional effectiveness, e.g. adjustment bias. A consumer's psychology stimulates these biases (e.g. the way they process information or their personality) and subsequently skew the weighting and importance of decision variables - thereby affecting the decision process. Even though the promotional literature fully accepts that a consumer's behaviour determines promotional buying, very little work has directly considered how specific psychological traits or behaviours moderate this type of purchasing. **Chapter 1** concluded by highlighting that there is a research gap concerning how and why a consumer's psychology determines decision outcomes for promotions.

This chapter goes about attempting to highlight the psychological and behavioural factors that could be influential in promotional decision making. To achieve this goal a significant literature review component goes about considering how findings from the broader consumer decision literature could apply to promotional contexts. Furthermore, the chapter uses a qualitative research design that reports on the results of 20 semi-structured interviews carried out with experts in the fields of pricing, marketing

and academia (consumer specific). The purpose of these interviews is twofold. First, it evaluates the extent to which the literary findings from the more general consumer behaviour field are used to inform real pricing practices and design. Second, it aims to explore if the psychological factors found essential to more general consumer purchasing could help explain how and why promotions can bias decisions. Ten themes emerged from a detailed thematic analysis of the interview transcripts. Very much aligned with the literature, the themes highlighted how many psychological traits and behaviours can influence decision outcomes and how these could apply to promotional contexts. The themes examine everything from demography and personality to empowering traits, e.g. financial literacy, price expectations and brand relationships. The importance of each decision driver and the relationships between these drivers is also considered. To conclude, the discussion section evaluates the validity of the themes in light of the previous literature and promotional decision-making. Based on the literary gaps some hypotheses are proposed.

## **2.2 Introduction**

Although originating from the broader consumer literature, there is a growing body of pricing research concerned with the impact of consumer psychology on pricing strategy (Dhar, Gonzalez-Vallejo and Soman, 1995; Dhar and Nowlis, 1999; Goldsmith and Amir, 2010; Mazar, Shampanier, and Ariely, 2012). For instance, it has already been noted that deal-prone consumers see promotions as an end in of themselves, with the seeking and redeeming of promotions being of higher importance than inventory needs or even the purchased item (Pechtl, 2004). From this, the newer literature on deal proneness goes on to suggest two psychological factors that are responsible for this seemingly irrational purchasing behaviour: consumer aversion to risk and the perception of probable return (Ailawadi, Gedenk, Langer and Neslin, 2014). More specifically, despite consumers being typically risk-averse, they accept promotions because of their innate optimism that promotions will offer them value (Goldsmith and Amir, 2010; Mazar, Shampanier, and Ariely, 2012). Therefore, when faced with promotions the anticipation for higher probable returns can make some consumers less risk-adverse. Vaidyanathan *et al.* (2000) support this psychological association by showing that above all a consumers' attitude towards promotions is to purchase. Purchasing in this fashion represents the robust promotion-value heuristic described in **Chapter 1**.

Despite the promotion-value heuristic playing a pivotal role in the decision process, Laroche *et al.*, (2003) theorised that promotional decisions are far more complicated than one might assume. Their

cogno-affective theory of promotional purchasing proposes that promotional decisions are a direct result of some intertwined cognitive and affection-driven behaviours. Figure 4, depicts the hypothesised theoretical structure and proposes that those who make effective promotional decisions were more inclined to process and search for information at the point of sale (POS). Moreover, efficient decision-makers conduct a thorough cost/benefit evaluations of the critical product drivers. These cognitive aspects of the decision combine with affective or emotional ones, e.g. brand loyalty to help drive a choice and obtain utility from the outcome.

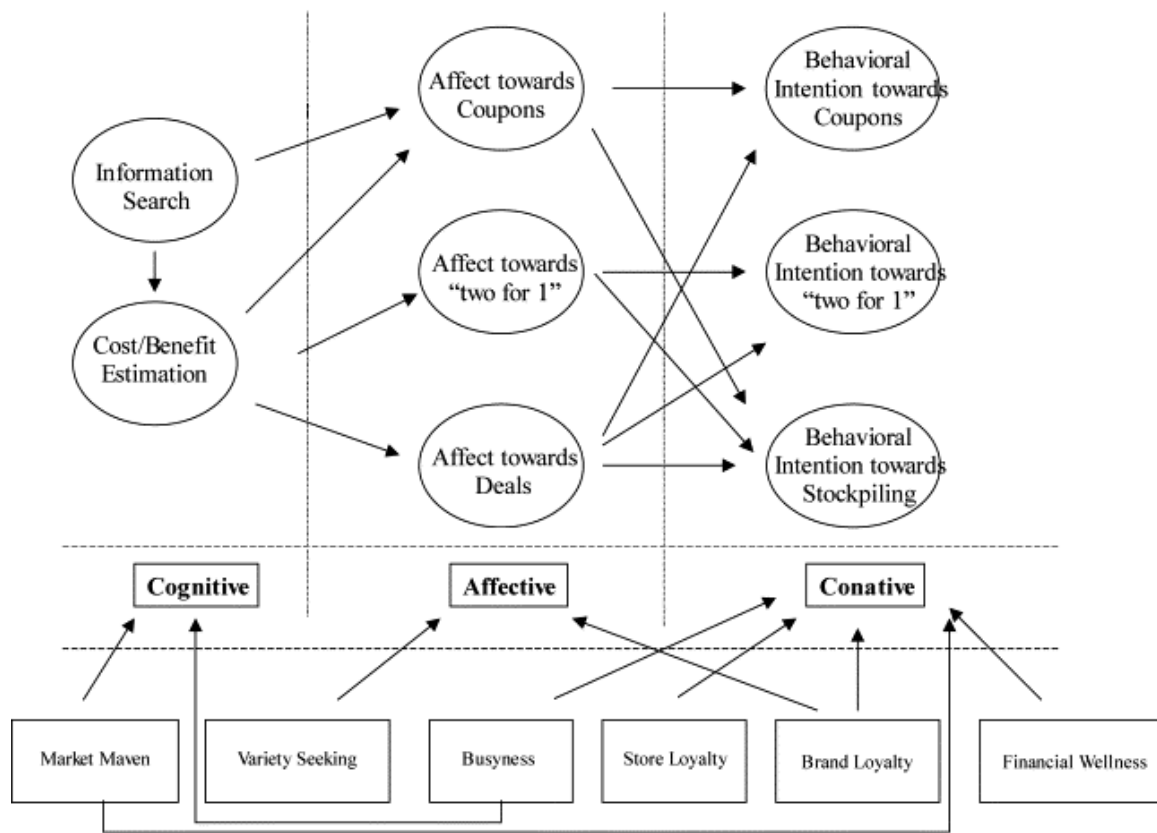


Figure 4. Consumers use of promotions: process and traits influence (Laroche *et al.*, 2003)

Support for the cogno-affective theory comes from a variety of sources. First, the proposed cognitive and affective elements of driving decisions are prevalent across the decision literature and so are likely valid in the promotional context. For example, the three-step model described by Einhorn and Hogarth's (1981) bears significant resemblance to this theory in that cognitive (information processing), and emotive (e.g., emotive drivers, e.g. brand relationships) processes help the consumer evaluate and make a decision. Moreover, there is some direct support for the cogno-affective theory from papers in the consumer and pricing research fields (*see* Alvarez and Casielles, 2005). These findings clearly show

that brand relationships, and how consumer cognitively engage with information, determines decision outcomes (Shimp, 2010; Veloutsou, 2015). However, these findings are typically generalised and offering little insight into which constituent behaviours of the two dimensions drive them. For instance, although the affection towards a brand is well-accepted as a driver of purchasing there is no research to suggest what behaviours (e.g., brand loyalty) drive the affective dimension. Therefore, there are likely an array of psychological factors that predict the cognitive and affective dimensions driving promotional purchasing behaviours.

Based on the current literature there are a number of factors, or behaviours, that could arguably define the proposed cognitive or affective dimensions in Laroche *et al's.*, (2003) theory. For example, the importance of a consumer's demography and personality can lead to deal proneness, while in turn can determine how consumers cognitively engage with promotions. Cognitively engaging with information is typically defined by the methods of information processing and price evaluation. In turn, how consumers cognitively engage with information predicts and determines brand relationships (Veloutsou, 2015). While the importance of these aspects on decision-making is highlighted across the consumer literature (e.g. Cialdini *et al.*, 1990; Fishbein and Ajzen, 1975; McGraw and Tetlock, 2005; Sinah, 1994), they have not been applied to promotional literature or considered in light of the cogno-affective theory. Despite this, there is irrefutable support the notion that cognitive and affective aspects in the more general sense inform decision-making (Dewberry, Juanchich and Narendran, 2013). Further work will be needed to assess which behaviours or traits inform each of the two theories dimensions and how the theory applies to decision-making for specific promotional practices.

A further problem with our current understanding of promotional decisions is that that econometric decision formulae are yet to account for any proportion of behavioural variance. With evidence supporting that consumer psychology may have a profound effect on promotional decision-making (e.g., see DelVecchio, 2005), these formulae will need the incorporation of behavioural moderators. To do so will require understanding the extent to which a consumer's psychology helps define promotional effectiveness for both promotions in general and specific methods. As was highlighted in **Chapter 1** very little work considers this, and so it is prudent to begin reviewing the broader consumer literature for answers. The remainder of this introduction will review how demographics, personality, information processing, price internalisation and brand relationships affect decisions both within and out of promotional contexts. The rationale for choosing to explore these



specific aspects of consumer psychology stem from the important that constitutive deal proneness and the models of promotional decision-making, e.g. Laroche *et al.*, (2003).

## **2.3 Literature Review**

### **2.3.1 Demographics**

Gender studies suggest that men and women's purchase decisions are primed by societal expectations (Bakan, 1966). Women adopt an "integrated-self" associated with altruistic behaviours, e.g. shopping for the family while men adopt a "separate-self" that rationalises purchasing upon hedonistic desires, e.g. buying a sports car (Oyserman, 2009). Supported by much consumer research (Josephs, Markus, and Tafarodi, 1992; Kimmelmeier and Oyserman, 2001), these self-constructs have considerable implications for promotional purchasing. For example, as promotions primarily benefit the purchaser via savings, they should be more attractive to consumers with a self-dependent construct. Men should, therefore, be the most affected by promotional ploys and evaluate their potential utility more favourably (Barone and Roy 2010). However, it could also be argued that promotions offer female consumers a means to fulfil altruistic needs at a discount, e.g. feed the family for less and so are equally as attractive.

Furthermore, the highly fluctuating social environment may distort this effect as women are increasingly adopting the societal norms typically prescribed to men (Davies and Bell, 1999). As such, some scholars argue that women are as likely, if not more, to be deal-prone as men – notion strongly supported in all of the del prone literature which explicitly specifies the typology to be female (Chandon *et al.*, 2000; DelVecchio, 2005; Laroche *et al.*, 2003). Other literature suggests that there may not always be gender differences in price evaluations but that there are likely very different reasons for promotional purchasing (Yap and Konrad, 2009). Since gender difference usually account for minimal variance and are ever in flux due to the changing social climate they are accepted as viable but of lesser importance for many routinely purchased goods e.g. groceries (e.g. LeBoeuf, Shafir, and Bayuk, 2010; Oyserman, 2009; Reed, 2004; Shavitt, Torelli, and Wong, 2009).

Inman and Winer (1998) go on to suggest that decision intentions can vary as much as a function of age as they can gender. For instance, they find youth (ages 18-30) to increase the likelihood of impulsive, biased, purchasing due to a desire for immediate gratification upon consumption. Put simply, decisions based on immediate cravings, like binge-eating, are shown to be ill-considered and can leave the consumer open to bias while offering little long-term benefit (Hausman, 2000; Herabadi,

Verplanken and Van Knippenberg, 2009). While it could be argued that such immediate gratification offers the consumer some form of personal utility; research consistently finds that hedonistic/gratification-based purchasing offers little or no satisfaction beyond immediate consumption (Chang, Lv, Chou, He and Song, 2014).

Concerning older consumers (i.e. those over 50), Myers and Lumbers (2008) suggest that a lack of disposal income makes older consumers equally prone to decision bias. Their findings suggest that income pressure exacerbates the importance of discount use in simple routine purchases. Moreover, although older consumers are found to be more thorough when making purchase decisions (Bakewell and Mitchell, 2003; 2004), their ignorance to digital pricing methods equates to what could be viewed as a nativity of price fairness (Cole and Balasubramanian, 1993; Darke and Dahl, 2003). Since older consumers are also found to repurchase at the same grocery store regularly, it could be argued that this demographic regularly purchases without an accurate knowledge if the prices paid are representative of the market (Sethuraman and Cole, 1999). Such a notion is supported by the literature stating that older shoppers are particularly likely to seek out and redeem in-store promotions vs online (Raju, 1992). Younger consumers are contrastingly found to engage more with online promotions and so are more prone to marketing ploys from electronic marketing and stimuli, e.g. mobile advertisements (Dickinger and Kleijnen, 2008). It could, therefore, be concluded that age has a significant effect on promotional decision-making, despite the findings mentioned earlier being mostly inconsistent and weak.

Intergenerational and societal influences have also been found to be consistent predictors of promotional behaviours (Shah and Mittal, 1997). Mittal and Royne (2010) for instance found that parents' behaviour accounted for 41% of the variance in young consumers' promotional-seeking behaviours. In fact, parents have been found to influence their child's risk perceptions (Arndt, 1972), brand preferences (Moore, Wilkie, and Lutz, 2002), advertising scepticism (Obermiller and Spangenberg, 2000), value conscientiousness and convenience orientation (Mandrik, Fern, and Bao, 2005). It, therefore, stands to reason that deal-prone behaviours are equally transferable.

In explanation of these intergenerational effects, the theory of 'consumer socialisation' was proposed (Ward, 1974). The theory describes the process and environment through which young adults develop, habituate and use the stereotypical consumer behaviours from their social class (John, 1999). For instance, high mass-media engagement and strong peer influences among young adults in lower

social classes were found to correlate with deal-prone behaviours positively, preferences for food items and materialistic purchasing, i.e. buying for the sake of egotistical gratification rather than functional need (Livingstone and Helsper, 2006; Meyer and Anderson, 2000; Wooten, 2006). However, some scholars argue that due to their having less disposable income, consumers from lower social classes are more likely to engage with their decision more to obtain the best VFM (Connor, Dewson, Tyers, Eccles, Regan and Aston, 2001).

Since actively engaging and evaluating decision information is typically associated with decision efficacy (Sirgy, Johar and Wood, 2015), it could be argued that lower social classes are less likely to fall victim to promotional ploys. In contrast, higher social class is associated with better levels of education (Archer, Hutchings and Ross, 2005) and disposable income, which decrease the perceived financial risk associated with purchases (Rani, 2014). Since more affluent consumers consider the price to be less important, the likelihood of evaluating price fairness reduces. It could, therefore, be suggested that higher social classes are more likely to be deceived by promotional ploys. Such a notion is supported in that medium and upper social classes are consistently characterised as being deal-prone (DeIVecchio, 2005). Not universally validated, the findings concerning social class are weak, inconsistent and need further testing.

In sum, there is clear evidence to support the importance of demography in promotional decision-making. While the evidence in this section shows how specific traits have the potential to influence promotional decisions, the importance of demographics is also supported across the whole deal proneness literature. As was discussed in **Chapter 1** the deal prone trait uses a combination of demographic and personality traits to predict promotional behaviour. However, the effect sizes regarding each specific demographic trait is usually negligible even in the deal prone literature (Pechtl, 2004). Because of this the inclusion of demographics in further work is warranted but will likely not offer anything significant. That said, demography in the deal prone literature is only half the story and is typically used to describe and inform promotional behaviour rather than explain. In contrast, personality is considered by the deal prone literature as a significantly critical component that can be used to explain why decisions are made more so than demography (Blattberg, Buesing, Peacock and Sen, 2010).

### 2.3.2 Personality

Personality can be described as a set of behavioural and hereditary traits that help define an individual's persona. In the most general sense, these generalised patterns of behaviour determine responses to environmental stimuli (Kassarjian, Gamble, Gunson and Jaeger, 2005; Kotler and Keller, 2006; Mullin, 2010). While there are many conceptualisations of these traits, the most accepted theory is known as the 'Big Five'. The 'Big Five' refers to extraversion (social inclinations), conscientiousness (thoughtfulness), openness to experience, neuroticism (anxious and fearful) and agreeableness. Although the five traits have been documented throughout the literature to influence consumer choice (Pillai and Kumar, 2012), they are typically only considered in the promotional literature as components of deal proneness. Moreover, it can sometimes be difficult to make conclusions from the personality research in this space as the effects sizes of each trait on promotional behaviours are generally weak and have not been considered in light of the 'big four' or promotional decision making. With marketers increasingly developing their strategies based on the personality and attitudinal beliefs of their targeted consumers this research gap deserves attention for practical as well as theoretical reasons (Bhasin, 2006).

A variety of 'Big Five' traits are commonly cited as essential to the efficacy of general purchase decisions (Davis, Patten, Tweed and Curtis, 2007). For instance, Swaminathan, Stilley, and Ahluwalia (2009) suggest that personality has an impact on product value perceptions, with extraversion being a strong predictor of products associated with hedonistic desires, e.g. high-end sports cars. Furthermore, as purchasing is a social experience, extraversion can play a crucial role in the determination of what, when and why to purchase. As such, more extraverted individuals are suggested as being more likely to binge purchase under social pressure, e.g. when shopping with friends (Coventry and Brown, 1993; Pantalon *et al.*, 2008). Since hedonistic and binge purchasing are commonly associated with irrational buying (Müller, Mitchell and de Zwaan, 2015), high extraversion could, therefore, pose a risk to decision utility. The detrimental effects of extraversion on decision utility are generally well supported but require validation in a promotional setting (Chandon, Wansink, and Laurent, 2000; Raghuram, Inman, and Grande, 2004).

Applied to promotional contexts, coupon research finds personality traits to account for significant variance in promotional consumption (Murthi and Rao, 2012). Among the traits conscientiousness is typically cited as the most important. Conscientiousness, which is referred to in

the promotional literature as 'value-consciousness', has been associated with cognitive thinking and the deeper evaluative mechanisms associated with utilitarian purchasing (Baumgartner, 2002; Mowen and Spears, 1999). Meta-analyses considering the 'Big Five' traits together confirm that increased conscientiousness and emotional stability were consistently associated with decision accuracy (Dudley *et al.*, 2006), utility, and risk-adverse decision-making (Soane, Dewberry and Narendran, 2010). However, without a degree of emotional stability, Pillai and Kumar (2012) find conscientiousness to positively correlate with coupon seeking and redemption, with highly conscientious consumers striving to get better VFM via promotional purchasing. More recently, neuroticism and conscientiousness have been associated with promotional-seeking and redemption behaviours with both being described as increasing decision bias (Cheng and Furnham, 2014). Tan and Chua (2004) further confirmed this finding, additionally showing that 'agreeableness' combined with 'conscientiousness' and 'neuroticism' increased the acceptance of promotions and fostered purchase intentions.

Although these findings are promising, the overall effects of personality on decision-making vary significantly as a function of the person's trait profile (Davis *et al.*, 2007). For example, dominant extraversion and agreeableness traits are commonly associated with intuition and impulsivity (Campbell and Heller, 1987); however, in turn, these traits have been shown to lead to risk-prone, ill-thought-through decisions (Franken, van Strien, Nijs and Muris, 2008; Martin and Potts, 2009). Given these findings, Dewberry, Juanchich and Narendran (2013) sampled 355 participants with measures of decision-making competence, cognitive styles and personality. Cognitive styles, e.g. use of intuition, did not add any significance to decision competence but personality did. More specifically, neuroticism and extraversion were particularly significant in predicting decision outcomes that aligned with the goals of the consumer.

In light of these findings, the role of personality in promotional contexts seems valid yet needs further exploration. This is especially the case for individual promotional methods, for which personality has yet to be investigated at all. In so doing, scholars would be able to ascertain not just what traits influence deal proneness for these more modern methods but also those that actively determine the utility of choices. Furthermore, in light of Narendran's (2013) findings, there seems to be a rationale to further explore how important personality is to promotional decisions over, say, cognitive methods of information processing.

### 2.3.3 Information Processing

A great deal of evidence suggests that demographics and personality influence how consumers process product information (Pacini and Epstein, 1999). For instance, being ‘unagreeable’, ‘closed to new experiences’ and ‘conscientious’ has been associated with the way consumers cognitively engage with purchase information (Sadowski and Cogburn, 1997). For the most part, conscientiousness and neuroticism are associated with deeper, more cognitive, modes of thinking while extraversion and openness with intuitive, impulsive, thinking (Dewberry, Juanchich and Narendran, 2013). The importance of the way that consumer process information based on these traits is central to the core decision models in the decision and promotional field. For example, the way that a stimulus is processed constitutes the first part of Einhorn and Hogarth’s (1981) evaluative triad and part of the cognitive component in Laroche *et al's.*, (2003) cogno-affective theory of promotional behaviour. Both approaches suggest that individual difference influence the cognitive stage of the model which forms the first part of the decision process. Two dominant models describe how, why and what information is processed - the ELM and Dual-Process theory.

The elaboration likelihood model (ELM) is the more contemporary approach, suggesting that information is processed either centrally or peripherally. Centrally processed information is usually conscious and interactive, focusing on the core value drivers of a product. For purchases, price and quality are typically the attributes processed most centrally. In contrast, peripherally processed information is usually more intuitive and typically concerns aesthetic or hedonistic attributes, e.g. packaging, product colour and branding. A great deal of research supports the validity of the ELM theory, yet the model is commonly criticised for being highly dependent on individual differences (Kitchen, Kerr, Schultz, McColl and Pals, 2014). For instance, consumers with high disposable income may consider branding more important than price, thus processing brand attributes, e.g. colour or design centrally. The ELM model, therefore, offers little in helping to determine decision efficacy without first understanding consumer preferences and demography.

Dual process models are the second of the dominant theories in this space. They suggest that when considering purchase options, consumers use either cognition and/or intuition to process the information at hand. Cognition is deliberative and conscious while intuition is fast and typically unconscious. Consumers use such methods to evaluate or simplify their decisions accurately. Such cognitive and intuitive behaviours have been thought of as a personality trait and are typically measured

as 'need for cognition' (NFC) and 'faith in intuition' (FII). Using FII and NFC measures, the literature has found the importance of a combination of cognition, intuition and some empowering traits to promote decision efficacy (Evans, 2003; Glaser and Walther, 2013; Glöckner and Wittman, 2010). For instance, the best decision-makers are characterised by high financial literacy and purchase experience which allows them to use intuition when purchasing favourite products but cognition for new, unfamiliar, ones (Glaser and Walther, 2013). However, research has found that if consumers rely too much on either trait, then their decisions may be biased. Relying only on intuition, for example, can promote the use of heuristics which may equate to a promotion being perceived as attractive despite offering no value (Lichtenstein, Netemeyer and Burton, 1990). Similarly, the overuse of cognition can promote cognitive load - with overstimulation leading to the dilapidation of cognitive functions (Vohs, Baumeister, Schmeichel, Twenge, Nelson and Tice, 2014). Research clearly shows cognitive load to promote anxiety, resulting in decisions that are based on typically the most fundamental factor, e.g. price. A high cognitive load is strongly associated with biased decisions (Deck and Jahedi, 2015).

Despite the literature often associating intuition with biased decision-making (Alós-Ferrer and Hügelschäfer 2012), evidence has shown its superiority. For instance, in some cases faith in intuition (FII) has been shown to increase decision utility, even in promotional contexts (Dijksterhuis and Nordgren, 2006; Gigerenzer, 2007; Gigerenzer and Gaissmaier, 2011). This finding is typically attributed to an experiential (Sladek *et al.*, 2006) or literacy component (Lusardi, and Mitchell, 2009) with research indicating that well-educated, experienced and value-conscientious consumers use intuition along with cognition to make utilitarian decisions (Evans and Stanovich, 2013). However, scholars maintain that FII and NFC are uncorrelated in much of the consumer research given that most consumers generally rely on only one technique (Petty, Briñol, Loersch and McCaslin, 2009).

Applied to the pricing literature, deal-prone consumers have been shown to have unusually high NFC. Research suggests this to be a consequence of striving to obtain 'value for money' and in so doing consumers have the propensity to use cognition to evaluate the discounts presented to them (DeVVecchio, 2005; Pacini and Epstein, 1999). Furthermore, the literature shows consumer experience and conscientiousness to increase 'deal proneness' which can further promote a more cognitive processing style (Baumgartner, 2002; Mowen and Spears, 1999). Given that overuse of cognition can be detrimental to decision-making it stands to reason that to get the best VFM deal-prone consumers may implicate their decision efficacy. This notion is supported but without any conclusive empirical

evidence. Since few studies have directly considered dual processing models in promotional contexts, the research that does exist suggests that a combination of intuition and cognition is needed for typical consumers to obtain utility. However, those who are highly experienced and financially literate may find that intuition offers them the same utility.

### **2.3.4 Price Internalisation and Decision-Making**

During the processing of any purchase-related information, consumers need to make an accurate evaluation of the costs and benefits. In promotional contexts, the first attribute considered is the price. According to both Laroche *et al's.*, (2003) cogno-affective theory and Einhorn and Hogarth's (1981) decision triad, the first attribute considered and evaluated benchmarks the start of the evaluation process. According to the consumer literature when evaluating prices consumers, there is a likelihood that consumers internalise the advertised price (Kahneman and Tversky, 1979; Sherif, Taub and Hovland, 1958). These internalised prices are often used as reference points in evaluating price fairness and have therefore been named internalised reference prices (IRPs). Research has indicated that consumers who are more intuitive in their processing of prices are likely to be at a higher risk of internalising promoted prices without their discounted context (Alford, and Biswas, 2002; Lowe and Alpert, 2010). In contrast, consumers who are cognitive in their thinking style can compartmentalise price and context and can later recall the reasons for price discounts. Exceptions naturally occur, with purchase expertise and financial literacy being fundamental to improving the internalisation process (Lichtenstein, Netemeyer, and Burton, 1990). The experience offers a sense of price stability across time while literacy offers the ability to evaluate the extent of price fluctuations.

Although traditionally considered stable and consistent, IRPs have been shown to be highly malleable (Kornell and Bjork, 2009). There is even evidence to suggest that after lengthy promotions the malleability of IRPs leads the discounted price to be internalised as normal. Because of this, returning a product to its regular price is often perceived as a price increase (Arora, 2008). Supporting these findings, the literature generally accepts that promotions have a negative influence on the accuracy of internalised prices. Sinha and Smith (2000), for instance, suggest that multiple promotions, as opposed to one-off promotions, are particularly effectual in changing IRPs (Kalwani and Yim, 1992; Sinha and Smith, 2000). While such findings are criticised for being particularly applicable to new products (Sinha and Smith, 2000), review work suggests that the constant flux of product prices requires IRPs to be continuously updated.



Due to this updating process and the frequency of promotions in today's retail settings, internalising discounted prices is a likely phenomenon (Lowe and Alpert, 2010). In support of this theory, Lowe and Alpert (2010) examined how promotions for new products on the market affected value perceptions. They showed that IRPs especially evolved because of the promotion since consumers had little experience with the presented product. Based on their findings they proposed that for new products, consumers assimilate the prices of similar products to create an average 'fair' price (Lowe and Alpert, 2010). In so doing, they are susceptible to include promoted prices from both internal and external sources, biasing their IRP and thus their decision process.

In sum, the way that consumers engage with and evaluate prices is a central cognitive component of Laroche *et al.*'s., (2003) theory of cogno-affective decision making. There is substantial evidence in the IRP literature to suggest that how prices are internalised, remembered and used can have a significant impact on decision outcomes. While this type of cognitive focused psychological literature falls directly into the pricing domain, only a handful of studies have looked at the effect of IRPs in promotional contexts. Some studies suggest promotions directly influence IRPs quickly and effectively, reducing the internalised price of a product and having that act as the benchmark for future evaluations. Other research suggests this only happens after lengthy promotions. In either case, two conclusions can be drawn from this novel research. First, promotions can manipulate how prices are perceived which means that later evaluations of the same product may be distorted. Second, IRPs are mnemonic constructs that are highly useful in determining price fairness but are only as reliable as their representativeness. Consumers who pay proper attention to the price and promotional context can internalise prices correctly. In effect, the method of information processing determines how a price is internalised and evaluated, which therefore supports the two cognitive components involved in cogno-affective theory.

### **2.3.5 Brand Relationships & Decision-Making**

IRPs have also been linked with a variety of consumer behaviours such as brand relationships. Brand relationships are typically characterised via a combination of brand loyalty, the costs of switching brands and identifying with the brand on a psychological level (Bian and Moutinho, 2011; Madhavaram, Badrinarayanan and McDonald, 2005; Meenaghan, 1995). Some research suggests that IRPs are essential in defining brand perceptions via the recollection of past prices paid and the price's fairness (Mazumdar and Papatla, 1995). If the previous prices paid were fair, offered the consumer

value, and met expectations then loyalty for the brand is built. On a larger scale, loyalty towards retailers can be built in a similar fashion.

Although little work has considered IRPs and brand loyalty together, there is evidence to suggest that even if an IRP determines the price to be 'unfair', high brand loyalty will retain brand perceptions. One reason for this is the ample evidence to suggest that strong brand loyalty or identification can trump the importance of other typically important decision drivers like the price (Bergkvist and Bech-Larsen, 2010). The theory that brand relationships can have such a powerful effect on decisions is proposed in Laroche *et al's.*, (2003) model by the distinct cognitive and affective components of a decision - the affective element being potentially defined by brand relationships.

Among the few studies concerning brand relationships with promotional purchasing, higher brand loyalty and brand identity were found to be reliable predictors of 'deal proneness' (Joseph and Sivakumaran, 2009; Valette-Florence, Guizani and Merunka, 2011). Webster (1965) was among the first advocates of this notion, concluding in his seminal work that those more susceptible to promotional ploys are expert shoppers buying brands to which they feel loyal. Moreover, identifying with a brand permits access to its respective social tribes, groups of consumers with similar attitudes, beliefs and brand affiliations (Goulding, Shankar and Canniford, 2013). The research also suggests that purchase gratification not only comes from the loyalty relationship with the brand/organisation but from sharing the experience with the related social group. As such, consumers with a sense of identity and loyalty to a brand are likely to purchase in line with the social tribe's norms (Wang, Zhao and Li, 2013) despite the utilitarian outcomes of these purchases. In fact, there is ample evidence to show that strong brand relationships can severely bias decisions because of the emotional, rather than practical, utility gained from the choices (Bergkvist and Bech-Larsen, 2010).

In short, the literature shows that highly loyal consumers purchase based on personal gratification rather than utility, leaving themselves open to promotional ploys. Although such research is still very much exploratory, the findings regarding more general brand relationships point towards these having potentially noteworthy levels of influence on promotional decision-making (Chandon *et al.*, 2000; Kim, 2000). Furthermore, there is some evidence to suggest that cognitive aspects of decisions can influence the development of brand relationships which would lend support to Laroche *et al.* 's., (2003) theory. The application of this relationship to promotional contexts is yet to be explored.

### 2.3.6 Interview Aims and Hypotheses

After reviewing the broader consumer literature, it seems that a plethora of psychological factors may influence the decision-making process. Among the individual traits seemingly significant were gender, age, social class and a variety of the 'Big Five' personality traits (e.g., extraversion, conscientiousness and agreeableness). Together this mix of demography and personality traits has been called psychographics (Demby, 2011). Notably, conscientious individuals were better decision makers, while those who were agreeable and extraverted were more susceptible to promotional ploys. The effects of demographics were noteworthy but need further testing. According to the literature both demography and personality were found to help determine how consumers' start the cognitive phases of the decision-making process.

Through their chosen processing method consumers can accurately assess the fairness of a promotion by evaluating the price and considering brand relationships. The literature shows that an over-reliance on either cognition or intuition, without the needed complimentary skills, could be highly detrimental to decision-making. For example, intuition in the presence of financial literacy and consumer experience was found to aid the decision process significantly - making decisions more fluent and effective than highly cognitive decisions alone (Dewberry, Juanchich and Narendran, 2013). If used without due experience, intuitive decision-making is commonly cited as a significant cause of bias. Since utilitarian decision making seems to hinge on a mix of information processing styles, experience and financial literacy, the literature shows that the best decisions makers use a combination of intuition and cognition across. Intuition can help aid utility in familiar contexts where prices are known, while cognition can help in unfamiliar contexts and allow for the accurate internalisation of IRPs. These IRPs are the fundamental foundations needed for price evaluations irrespective of the mode of information processing. According to Laroche *et al.*, (2003) the searching, engagement and processing of price (the basis for the cost/benefit evaluation in promotions) forms the basis of the decision. These factors influence the effect of a decisions affective component which describes how consumers interact with brands and determine brand-loyalty behaviours. Higher brand loyalty is suggested to encourage more emotionally-gratifying purchasing, which leaves consumers open to decision bias.

In sum, the literature points to a clear relationship between a consumer's psychology and how decisions are made. Although many of the findings presented only refer to more general purchase decisions, there is ample evidence to suggest that similar findings could be observed in promotional

contexts. To develop an understanding in this area research needs to consider how the presented psychological factors interact and determine the decision utility for specific practices rather than just promotional seeking behaviours. Understanding this will provide support for Einhorn and Hogarth's (1981) decision triad and the cogno-affective theory. To validate the theoretical relationships presented, and explore how they are considered in applied contexts, a series of expert interviews will be conducted. The purpose of each interview was to establish the factors that experts in the fields of promotions, pricing and consumer behaviour believed would influence promotional effectiveness and decision-making. In so doing, each interview would help ascertain the extent to which the literary findings were valid and indeed considered in developing promotional approaches.

## **2.4 Methodology**

### **2.4.1 Participants**

Twenty interviews (*see* Appendix 3 for list and transcript) were conducted with experts in the fields of marketing ( $n=7$ ), pricing strategy ( $n=7$ ) and academia ( $n=6$ ). Interviewees were chosen based on their considerable experience in pricing, marketing or consumer fields. Selected participants regularly conducted work, analysed data, and had international recognition for their work in the pricing/consumer domain. A list of 134 potential participants was drafted and subsequently filtered down by position and experience. CEOs of multinationals and those with under ten years' experience in the field were excluded from the participants contacted. CEOs were excluded as they typically only have an overview of pricing and are not directly involved in its design, while only those with over ten years' experience could be considered experts (Ericsson, 2006). After the filtering process, 34 participants were removed. The final 100 participants were contacted by email. Participants' ranged from marketing directors at large FMCG retailers to academic professors. The interviewees were from western, individualistic, cultures and were primarily based in the UK and US. Altogether, the response rate was a low 27%.

### **2.4.2 Design**

Using a qualitative research design, this study used open-ended interviews to probe how consumer psychology may influence promotional decision-making. Each interview consisted of four questions (*see* Table 3) and an attribution task. Rather than structuring the interviews around the literary findings, the open-ended nature of the questions provided an opportunity to affirm the validity of the literary-based findings using an open dialogue. In the final attribution task interviewees created their own hypothetical model of promotional decision efficacy from an extensive list ( $n=30$ ) of behavioural and

purchase factors (see Table 4). The list of factors was derived from the essential factors typically important to FMCG purchases. All the interviews were conducted via Skype, and each lasted 20 minutes. The attribution task was via an online survey platform after the interview.

**Table 3.**

The four open-ended questions asked in each of the interviews.

Question Number	Question
1.	What is your role in your organisation and what is your focus?
2.	What work do you do in relation to promotions?
3.	What factors do you think influence the way consumers make efficient decisions when buying in promotional contexts and why?
4.	Of the factors mentioned, which do you think is the most important and how do these factors interlink? Or do they not?

**Table 4.**

The 30 elements/dimensions that participants could choose from in predicting the effectiveness of consumer decisions in promotional contexts.

Gender	Education Level	Colours
Socio-Demographics (Social Classes)	Numerical Ability	Advertisement
Money	Job/Occupation	Promotional Communication
Purchase Experience	Brand Loyalty	Exposure to Promotion
Personality	Retailer Preference	Consumer Evaluative Ability
Shopping attitudes	Price	Time
Promotional Method	Quality	Costs required to purchase
The frequency of the promotion	Product Variety	Consumer's Value Perceptions
Internal Prices	Promotional Length	Pressure from competition
Technological Aptitude	Brand Identity	Need to save
Age	Packaging	

### 2.4.3 Data Collection and Procedure

Potential participants were recruited via LinkedIn and email. Upon acceptance, participants were scheduled a 35-minute Skype time slot over the course of one week. Skype was used as the medium to conduct the interviews; its online recording mechanism to take a recording of the discussion and Nuance's Dragon Pro 14 voice-text software to transcribe the information. Each interviewee was told the overall aim of the interview before reading aloud the voice recognition paragraph that would allow for accurate voice to text transcription. Questions were asked precisely as stated with the interviewer providing no other contextual information. After the interview was concluded, participants were provided with a URL to the attribution task. The task required participants to rank order the psychological and decision variables they considered the most important to promotional decisions.

### 2.4.4 Analysis

Interview transcripts were analysed using a thematic analysis approach - a qualitative method used for 'identifying, analysing and reporting patterns (themes) within data' (Braun and Clarke, 2006). To extract the themes and relevant data a coding framework was devised. The information extracted and reported in the next section is structured regarding some central themes. Figure 5, depicts the overarching themes and their sub-groups that emerged from the data.

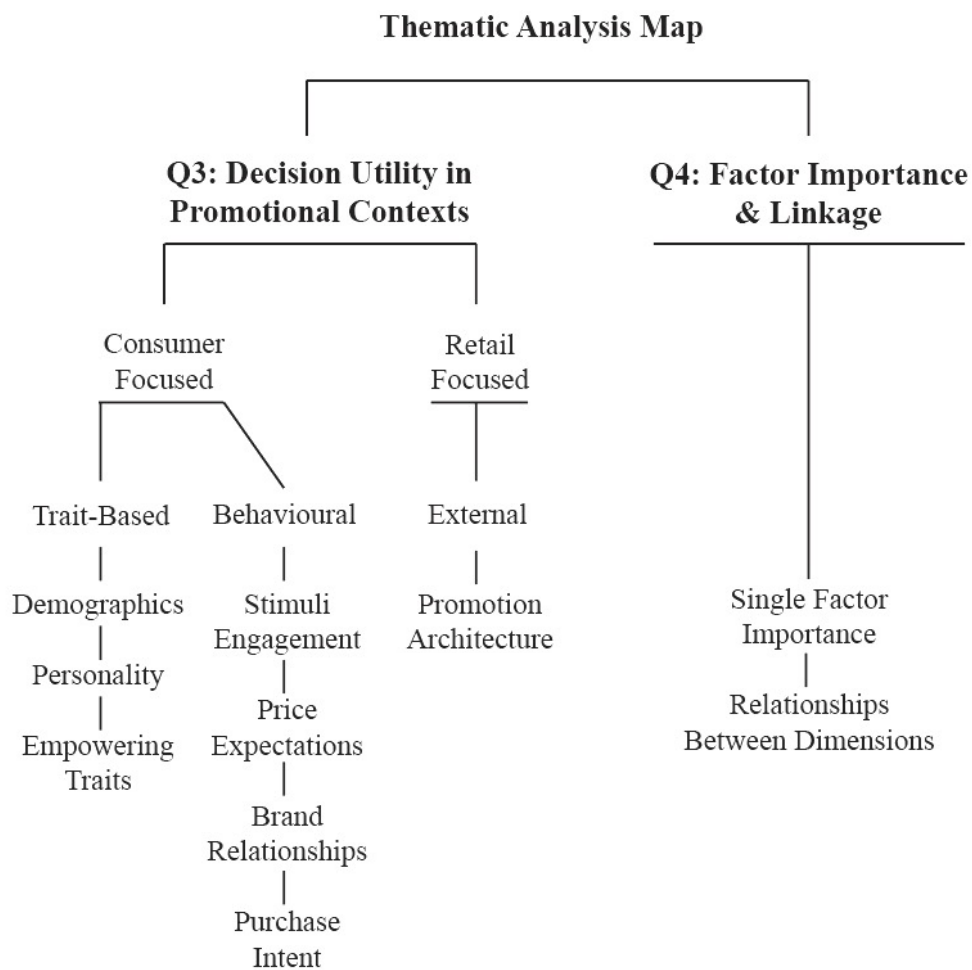


Figure 5. A thematic tree depicting the overarching and sub-themes that emerged from the interviews.

## 2.5 Thematic Analysis

During the interviews, participants described how their experience in the pricing field has helped define how they see promotional purchasing. Academics were seen to base their perspectives on the literature and applied knowledge. In particular, they were able to provide a far more holistic and evidence-based understanding of how promotions influence purchasing than using the literature alone. The senior pricing consultants used evidence-based practice and years of B2C (business to consumer) pricing experience to offer insights about the external factors driving promotional purchasing. Their discussions suggest that biography and specific behavioural measures (e.g. brand loyalty) can significantly determine how prices are perceived and how promotions are interacted with. Finally, marketing experts offered insight into promotional framing methods and how best to leverage brand relationships and consumer typologies in their design. Taken together, the range of interviews seemed to provide ample information regarding how a consumer's psychology and the power of external forces, e.g. the price framing method or purchase environment interact to help determine decision-making. The following quotation could summarise the overall essence of the comments made: "*We agree that there is a sound series of phases in any one choice, but predicting choice is nearly impossible without understanding how the consumer thinks and interacts with the retailer*" The following sections outline the central themes and subthemes emerging from analysis of the interview transcripts.

### 2.5.1 Consumer Factors Influencing Promotional Decision-Making

#### Trait-Based Factors - Demographics

##### Results (see Table 5)

The importance of demographics in determining promotional engagement and purchasing were periodically distinguished. Among the traits explicitly discussed were gender, age, income, social class and education. For instance, there was a consistent consensus that females were still the primary consumers in the grocery sector, while over ten participants also described how they thought age impacted promotional purchasing and deal proneness. Furthermore, comments made on income tied in with the themes of social class and education. Interestingly, the discussions around these topics were less concise and conclusive, with the interviewees stating that more affluent consumers were highly price conscious. Despite high-income consumer's able to afford to make mistakes, this can be a bias itself. In contrast, for low-income consumers, it was thought that monetary constraints and lack of education made promotions highly appealing irrespective of their inherent value.

**Table 5.**

Summary of comments made by participants concerning the importance of demography on promotional decisions.

Theme	Participant Number							
	11 (Strategy)	9 (Academia)	12 (Academia)	4 (Academia)	16 (Marketing)	5 (Strategy)	20 (Marketing)	8 (Strategy)
<b>Demographics</b>	<p><i>'Designing effective promotions is all about giving the consumer's what they want. By way of example, in the cosmetics sector we heavily promote female products as females are still the primary consumers'.</i></p>	<p><i>'On the one hand young consumers buy rather impulsively and so should be particularly susceptible to promotions. Having said that, because GEN X is so tech savvy they can pretty much compare the market for the best deal online. Whether they actually get a good deal is less certain'.</i></p>	<p><i>'We find that older participants who have less disposable income tend to be more brand loyal and price conscious. As such they look for good deals in their local stores, tending not to cross compare prices'.</i></p>	<p><i>'Based on our research those with disposable income are more likely to be of higher social class and to be well educated. This should equate to having the ability to assess the 'fairness' of promotion with ease although their income generally means they can afford to buy what and when they need an item, discounted or not'.</i></p>	<p><i>'We often see promotions of premium products attract both low income and the high-income shoppers, despite the price remaining high it attracts all consumers'.</i></p>	<p><i>'Just because you can afford buy anything and waste food this doesn't mean the choice was right, in fact income probably means someone is more likely to buy without properly considering their choices'.</i></p>	<p><i>'We often bundle lower tier items to appeal to low income consumers. Even if the price of the bundle could be better consumers buy them anyway. For these shoppers, it's all about quantity over quality'.</i></p>	<p><i>'When we work with clients who 's target market is low income families we often design promotions to offer value but not the extent of our premium promotions'.</i></p>



### Discussion of theme

In sum, the demographic theme was prominent among all participants. It seems that although females are the primary candidates for promotional purchasing and bias, men are increasingly as likely. This sits well with the gender research that finds men to be increasingly as likely as females to adopt deal prone purchasing behaviours (LeBoeuf, Shafir and Bayuk, 2010; Reed, 2004). Moreover, the comments suggested that young consumers are aware of market prices but purchase recklessly – a notion supported in Hausman's (2000) work. In contrast, the data and literature showed that older consumers are described as conscientious, which was thought to equate to well-planned and thoroughly evaluated promotion seeking and purchasing (Myers and Lumbers, 2008).

According to the data, mid-aged consumers with disposable income and families were typically described as more time limited in their purchasing. In some of the literature, this could be construed as making consumers more likely to purchase impulsively and focus in on promoted products (Connor, Dewson, Tyers, Eccles, Regan and Aston, 2001). The importance of the mid-aged segment with moderated disposable income is supported as a primary component of the deal prone trait (DeVecchio, 2005). However, there remains a disagreement across the data how demography combines to impact decision utility and promotional purchasing.

While each of the demographic traits mentioned in the interviews has been positively associated in previous literature, the only theory that describes them together is deal proneness. However, the deal proneness theory is criticised for only using traits like demographics or personality to explain promotional behaviour. It could, therefore, be argued that the extent that demographics combine to explain a significant proportion of variance in promotional decisions is negligible. This is further supported in that the consumer literature finds demographic effects on purchasing to be inconsistent and generally weak (Bawa and Shoemaker, 1987; Gázquez-Abad, Martínez-López and Barrales-Molina, 2014).

## **Trait-Based Factors – Personality**

### Results (see Table 6)

A resounding number of participants believed that a consumer's personality or 'typology' was fundamental to purchase decisions, especially in promotional contexts. However, despite many comments about lifestyle traits, e.g. 'being social' only one participant mentioned how the traits could impact decision utility. Rather than referring specifically to the 'big five', marketers and consultants referred to cognomens of the traits, e.g. being social instead of extraverted.

### Discussion of theme

Based on the comments personality and lifestyle attributes were frequently described as necessary to promotional behaviours. Being extraverted, open and agreeable were suggested to impact decision-making abilities and outcomes negatively. These three traits are commonly mentioned in the broader consumer literature as having similar effects. For example, Swaminathan, Stilley, and Ahluwalia (2009) propose that extraversion is associated with binge and impulsive purchasing that can promote decision bias. Furthermore, extraverted individuals are suggested as being more likely to binge purchase under social pressure, e.g. when shopping with friends (Coventry and Brown, 1993; Pantalon *et al.*, 2008). Since hedonistic and binge purchasing are commonly associated with irrational buying (Müller, Mitchell and de Zwaan, 2015), high extraversion could be described by the interviewees as posing a risk to decision utility. Moreover, the literature also suggests that dominant extraversion, agreeableness and openness traits are commonly associated with intuition and impulsivity (Campbell and Heller, 1987); which again can lead to risk-prone, ill-thought-through decisions (Franken *et al.*, 2008; Martin and Potts, 2009). The comments made in the interviews, therefore, align with the literature in that extraversion, neuroticism and agreeableness could negatively impact decision utility.

The qualitative data derived from the interviews also suggests that conscientious and neuroticism are efficacious traits in helping to obtain better outcomes. Again, these findings are strongly supported in the literature which suggests that conscientiousness is associated with cognitive thinking and deeper evaluative mechanisms associated with utilitarian purchasing (Baumgartner, 2002; Mowen and Spears, 1999). Moreover, a meta-analysis in the area confirmed that conscientiousness and emotional stability were consistently associated with decision accuracy (Dudley, Orvis, Lebiecki and Cortina, 2006), utility, and risk-adverse decision-making (Soane, Dewberry and Narendran, 2010). Based on the comments and literature there are valid grounds to consider personality in the context of promotional decision making.

**Table 6.**

Summary of comments made by participants concerning the importance of personality on promotional decisions.

Theme	Participant Number						
	4 (Academia)	1 (Academia)	15 (Academia)	12 (Academia)	13 (Marketing)	11 (Strategy)	6 (Marketing)
<b>Personality</b>	<i>'Although we find effect sizes to be small personality is a key driver of purchasing. Take conscientiousness for instance, this trait is especially important in determining coupon seeking'.</i>	<i>'Shopping is a social activity and as such is open to social influence's, there is evidence to support that extraverted people will be more likely to consume promoted products when shopping with friends'.</i>	<i>'High conscientiousness would most certainly help improve these decisions, as it generally helps all similar financial decisions'. They went on to say that 'neuroticism may have an equally pragmatic effect on promotional decision making as the consumer intrinsically fears being duped'.</i>	<i>'Neuroticism may have an equally pragmatic effect on promotional decision making as the consumer intrinsically fears being duped'.</i>	<i>'I think that personality plays a vital role in how we each shop and how good our decisions are. I often notice that younger, more social people interact with our more flamboyant techy promotions.'</i>	<i>'When we advise our clients we always consider what's important to the consumer and who they are. If they are a social techy bunch, we make sure promotions are easily accessible on all forms of social media'.</i>	<i>'Before we market any promotions we look at the consumer typology we have created through our online panels. From there we build a consumer specific strategy that can increase promotional sales'.</i>

## Trait-Based Factors - Empowering Traits

Results (see Table 7)

A number of traits outside the scope of personality were mentioned as essential to promoting decision utility, e.g. purchase experience and numerical/financial ability. Comments only stemmed from the academic participant group, but both literacy and experience were suggested to help consumers effectively and accurately evaluate decisions at the POS.

**Table 7.**

Summary of comments made by participants concerning the importance of empowering traits on promotional decisions.

Theme	Participant Number		
	9 (Academic)	1(Academic)	3 (Marketing)
<b>Empowering Traits</b>	<i>'There are a multitude of traits that help determine decision utility. For instance, if we consider the impact of experience and mathematical ability in general decision-making, where both are shown to have resounding strategic and utilitarian benefits, the impact to promotional purchasing is equally as likely'</i>	<i>'While our research doesn't focus on empowerment traits per say, having good financial literacy invariably helps in assessing if a price is fair and right'</i>	<i>'If the consumer buyers a product or shops in a product category frequently enough they get to know the price and idiosyncrasies of the purchases. Based on this knowledge they can make good decisions, organisations obviously trying to leverage what they think consumers know to offer them 'better' deals but at a strategic advantage to them naturally'.</i>

### Discussion of theme

The literature suggests that high financial literacy and purchase experience characterise best decision-makers. This combination of traits allows the decision maker to a number of processing methodologies when considering what to purchase (Glaser and Walther, 2013). For example, recent findings support the notion that people with ample experience and good numerical ability can make intuitive decisions with equal if not more efficacy than cognitive, conscious ones (Lusardi, and Mitchell, 2009; Frey, Mata and Hertwig, 2015; Sladek *et al.*, 2006). Based on the data and previous literature it seems that obtaining decision utility whether in promotional, or other, purchase contexts may hinge on these two attributes.

## 2.5.2 Behavioural Factors

### Stimuli Processing

Results (see Table 8)

How, why and to what extent consumers engage with the price stimuli was frequently commented upon. In particular, academic participants highlighted that being less engaged with a product's price left consumers open to bias. Considering these comments, the depth and extent that consumers engage with a stimulus is suggested to help determine decision utility. For instance, the comments suggest that consumers who consciously engage with information are more likely to be able to assess potential flaws in promoted price. In contrast, intuitive behaviours, where consumers pay little attention to the information in the environment, were associated with decision bias. This aligns with the literary findings that generally support conscious decision-making to be beneficial to decision outcomes.

**Table 8.**

Summary of comments made by participants concerning the importance of how the method of information processing impacts on promotional decisions.

Theme	Participant Number		
	15 (Academia)	10 (Strategy)	13 (Marketing)
<b>Stimuli Engagement / Information Processing</b>	<i>'Those who engage with the product, it's price, and the purchase generally make better decisions. On the flip side, those who make decisions quickly and without thinking about them are prone to errors'.</i>	<i>'We often design promotions so that the consumer directly focuses on the advertised savings rather than the actual value per unit. We know that consumers rarely spend more than a few seconds deciding on a product, so we make it easy, focus on the savings'</i>	<i>'The key to a good marketing campaign is engagement; you want the consumer to know about your product to drive the purchase. However, when we say engagement we focus on target engagement. This means engaging consumers on the stuff they need to know and not the price. In the case of promotions, we get consumers on % off as consumer 'soften don't take the time to work out what the percentage means'</i>

#### Discussion of theme

By enlarge, the qualitative data derived from the interviews aligns with the literature. For instance, the best decision-makers are sometimes characterised as being cognitive in their decision making (Glaser and Walther, 2013). Moreover, there is ample research to show that intuitive decision-making is far more prone to bias compared to cognitive alone (Gigerenzer and Gaissmaier, 2011). Newer research is less consistent in its findings, suggesting that if consumers rely too much on either trait, then their

decisions may be biased. For instance, the literature often associating intuition with biased decision-making evidence has shown it can be superior in some decision contexts (Dijksterhuis *et al.*, 2006; Gigerenzer, 2007). The possibility that intuition can improved decisions over and above cognition was not addressed in depth by the qualitative data. Based on the literature and qualitative data it seems that the way consumers process information is likely significant in influencing promotional decisions. Moreover, the significance of the information processing element in decisions is further supported as it forms the crucial cognitive component in Laroche *et al's.*, (2003) cogno-affective model.

## **Behavioural Factors - Price Expectations**

### Results (see Table 9)

According to the interviews, consumers are thought to have a set of internalised prices that help define price expectations for future purchases. Based on these expectations it is possible for consumers to inflate the value of newer, potentially inferior products. Considering price expectations in the context of promotional decision utility only three comments were made. Two of the academic participants suggested that price expectations are fundamental to evaluating a purchase and yet despite their importance are highly fluid. Because of this fluidity, it is possible that consumers assimilate unrepresentative prices that, if used for evaluative purposes, may bias choice.

### Discussion of theme

The theme and comments on price expectations also aligned with the literature. Firstly, there is resoundingly strong evidence to suggest past prices paid form a significant part of the decision process. In particular, the IRP literature suggests that prices are internalised after being experienced in the purchase environment and are later recalled to inform price fairness for new purchases (Gigerenzer and Gaissmaier, 2011). There is also evidence to suggest that consumers can internalise the advertised price without the discounted context (Helson, 1964; Kahneman and Tversky, 1979; Sherif, Taub and Hovland, 1958). Such findings support the notion that IRPs are highly malleable and can significantly bias decisions should the discounted context not being accounted for when evaluating regularly priced items. As was discussed in the introduction, findings in the area also show that after lengthy promotions consumers can internalise the discounted price, seeing a return to the RRP as expensive (Sinha and Smith, 2000). Based on the literature and qualitative data presented, it is clear that how consumers view and evaluate prices is a fundamental component to their purchases.

**Table 9.**

Summary of comments made by participants concerning the importance of price expectations on promotional decisions.

Theme	Participant Number				
	1 (Academia)	8 (Strategy)	5 (Strategy)	9 (Academia)	15 (Academia)
<b>Price Expectation</b>	<i>'Every time we consumer a product we also consume knowledge about that product, including the price. Based on our past experiences we know if a product is good and worth the price paid'.</i>	<i>'In order to design an effective promotion, we need to help define the price expectations for a product category. We do this by keeping prices transparent and consistent for older products. For newer ones where consumers don't have much experience I think they use the prices of similar products. Based on this we can create an effective promotional strategy that leverages the prices of premium products for inferior ones'.</i>	<i>'We can safely assume that if a consumer has a price expectation that aligns with the market average they will work out quite quickly if the prices we advertise are fair'.</i>	<i>'Even if consumer have considerable experience in buying a product a one-time drastic price change can change the expectation for good. We often see that after lengthy promotions for instance that after a product returns to its normal price we see a slump in sales as the expectation is that of the discounted price'.</i>	<i>'If our well-formed prices are changed change by promoted prices, which they are, then essentially the benchmark we are using for price comparisons is moot. Obviously, this impacts the decision outcomes we make.'.</i>

## Behavioural Factors – Brand Relationships

Results (see Table 10)

The relationships consumers have with brands and/or products was suggested to have a significant effect on purchasing and decision utility. Almost all participants commented upon both suggesting that brand loyalty and the broader theme of brand relationships had a significant and potentially adverse effect on decision outcomes.

**Table 10.**

Summary of comments made by participants concerning the importance of brand relationships in promotional decisions.

Theme	Participant Number			
	6 (Marketing)	18 (Strategy)	19 (Marketing)	14 (Strategy)
<b>Brand Relationships</b>	<i>'Brand loyalty is a core sales driver for retailers, and it is generally assumed that loyal consumers will go above and beyond when buying from their favourite stores. Some of the sales data we see indicates loyal consumers to be strong purchasers of promotions'.</i>	<i>'Loyal consumers expect benefits from their loyalty, points aren't enough, so we help our clients devise promotions for high loyalty customers'</i>	<i>'Brand relationships are much like our own human ones, there is a form of blind trust which can lead to deception. Naturally, I am referring to the retailers here who often out of their status with consumers believe they can get away with things because the consumers know and like their brand'.</i>	<i>'Should a loyal consumer find out that they are being deceived then naturally the trust vanishes almost immediately, we have seen this many a time recent for such as with the horse meat scandal. If this happens consumers become more conscientious...'</i>

### Discussion of theme

Aligned with the data, the literature consistently shows that strong brand loyalty can have adverse effects on decision utility. More specifically, high loyalty is thought to create an emotive rationale for purchasing, i.e. the satisfaction of being loyal which many consumers believe they should be rewarded via discounts. Should loyal consumers expect discounts, they can exhibit deal prone behaviours including the consumption of promotions with little regard for price fairness or the promotions utility (DeVecchio, Henard and Freling, 2006). The comments support this notion by suggesting that strong brand loyalty leaves consumers blind to their decisions as they trust the retailers or brand. This sentiment has also been indicated in the literature on many occasions, e.g. Loureiro (2011) or Bain and



Moutinho (2011). Although such research is still very much exploratory, the findings regarding more general brand relationships point towards these having potentially noteworthy levels of influence on promotional decision-making (Chandon *et al.*, 2000; Kim, 2000). More exploration is needed to assess how other components of brand relationships, e.g. brand identification or switching, can influence promotional decisions.

## **Behavioural Factors – Purchase Intent**

### Results (see Table 11)

The final behavioural theme of purchase intent described how the intention to purchase determined the ability to evaluate purchase options successfully. Whether or not a purchase is planned or not was given considerable thought by the majority of the participants. It was suggested that consumers who intended to purchase a product typically went through a considerable selection, thought and evaluation process before buying. Comments also suggested that consumers knew the prices and information of planned purchases. Unplanned purchase decisions were understandably indicated to be open to more bias. This seemed to be especially pronounced when the participants talked about unplanned promotional purchasing. Therefore, it was suggested that intentional buying typically offered greater decision utility.

### Discussion of theme

The notion that planned purchasing aids in decision efficacy and utility is strongly supported in the literature by a multitude of research, e.g. the TPB. In contrast, those who bought spontaneously were prone to decision bias due to the cognitive and temporal limitations afforded by the purchase environment. This is likely because it is thought that for routinely purchased items, e.g. groceries consumers only spend 5–20 seconds considering products. Given this little consideration, consumers pick items up on the basis of price and value rather than the result of an evaluative consideration (Stahlberg and Maila, 2012). Since promotional purchasing is typically unplanned, it stands to reason that these decisions have the potential to result in equally biased outcomes. However, some research finds that even in planned purchase scenarios there is often an unplanned, impulsive, element to decisions, whether manifested by switching brands or adding extra items to the shopping basket. In sum, both the literature and data support the theory that actively planning to make a purchase increases the likelihood of obtaining decision utility. The extent that this is possible in typically, unplanned, promotional contexts is as of yet entirely unclear and requires further exploration.

**Table 11.**

Summary of comments made by participants concerning the importance of personality on promotional decisions.

Theme	Participant Number				
	12 (Academia)	17 (Strategy)	10 (Strategy)	4 (Academic)	7 (Academic)
<b>Purchase Intent</b>	<i>'Planning invokes a form a rationality into the purchases, even if the item being purchased is small if it is planned it means that we have thought about, what, how where and why we are going to buy it. We consider the inventory needs and the price'.</i>	<i>'When it comes to holiday-specific promotions such as thanksgiving we are fully aware that the consumers shop around for the best prices. In what we call rush sales periods where consumer's frenzy for deals they buy recklessly so our promotions can be more 'deceptive' shall we say'.</i>	<i>'Although many of the promotions we design are advertised over half are store specific. These are purchased by consumer's who are essentially browsing and offer us a great opportunity to shift volume at a more premium price point'.</i>	<i>'It is well known that browsing behaviour is open to bias, consumers who are enthralled with the experience of shopping often only look at the most basic purchase information such as price. This is why bundling works so well as consumers just see 'get lots for cheaper'. Little do they know that the unit price is often only marginally cheaper and given the likelihood of waste, more expensive per unit of consumption'</i>	<i>'Browsing can be gratifying and you can get great deals but unless you really think about what and for what price you're buying an item then you're at the mercy of the retailer'</i>

## **2.5.3 Retail/Environmental Factors Influencing Promotional Decision-Making**

### **External Factors - Promotion Architecture**

#### Results (see Table 12)

For pricing strategists and marketers, the primary theme addressed was the architecture/design of the promotions. In particular, they commented on how the product lifecycle stage, promotional length and the typology promotions can influence promotional purchasing and decision-making. Based on the comments from these two groups, the lifecycle stage of the product was suggested to heavily define a promotion's placement, value offering and sales potential. One academic participant connected the lifecycle stage to decision-making outcomes, with the length of a promotion being noted as having a profound effect on both promotional effectiveness and decision outcomes. Based on these comments it would seem that an inappropriately short or long promotion has detrimental implications to decision utility. Furthermore, the method of framing the price in a promotion is invariably essential to the decision and its outcomes. Each participant made their comments regarding the importance of promotional practices.

#### Discussion of theme

The theme of promotional architecture was discussed in depth. It was generally suggested that the market maturity of the product defined the extent that consumers evaluated the choices. Mature products, with which consumers are familiar, were suggested to require little consideration and required frequent promoting to encourage sales, the opposite being true for new products. This strongly aligns with Weber and Borchering's (1993) finding that in salient purchase contexts analytical choice models (e.g. The WAM) are the most appropriate given that salient decisions often rely on one or two factors and are less contextually dependent. Furthermore, promotional length was affirmed to play an essential role in our expectations of prices, lengthy promotions increasing the likelihood that the product is mentally associated with the discounted price. Once again, this notion is supported by many scholars who indicate that after lengthy promotions the RRP is viewed as expensive (e.g., Awunyo-Vitor, Ayimey and Gayibor, 2013; Palmeira and Srivastava, 2013). Should a product's perceived value deteriorate in this way then this misrepresentative information will bias future evaluations of the product. A considerable proportion of the literature supports the negative relationships between lengthy promotions and value perceptions (Sinha and Smith, 2000), although the length of the promotions required to elicit such effects is continuously debated.

**Table 12.**

Summary of comments made by participants concerning the influence of promotional architecture on promotional decisions.

Theme	Participant Number								
	8 (Strategy)	6 (Marketing)	15 (Academia)	2 (Marketing)	8 (Strategy)	4 (Academia)	10 (Strategy)	16 (Marketing)	17 (Strategy)
<b>Purchase Intent</b>	<p><i>‘Interestingly, from a strategic standpoint, I would say that although the profiling of a consumer group is vital, the in-store placement and frequency of a well-designed promotion increase product value in consumers’ eyes’.</i></p>	<p><i>‘Creating a promotional strategy in the B2C space can be challenging. One of the best ways to start is by looking at the product lifecycle and where the potentially promoted products sit. If the product is mature (over 2 years) and popular then consumers will buy it without thought. For these products, we make sure the value offering is large, the items are placed at the front of store and in a decent shelf position’.</i></p>	<p><i>‘For newer products consumer’s generally take more time to think about their options. The same is true for promotions, if the offer is in some way unfamiliar consumers spend time thinking about. On the flip side if it’s a product they know and love they buy buy buy’.</i></p>	<p><i>‘We limit promotions to two weeks max, after this the sales die out and consumers start expecting the item to be promoted. We don’t want to cannibalise sales in the product area’.</i></p>	<p><i>‘While time limiting promotions is definitely beneficial for sales we do at times offer month long promotions to shift volume. Consumer do love being able to get these products at low prices, but they start to know and expect them so changing anything about the deal composition is tricky’.</i></p>	<p><i>‘The length of a promotion has considerable implications to purchase behaviour. Long promotions change consumer’s price expectations that limit retailer’s ability to change the promotion. In a way, it makes them more conscientious. In contrast, it has also been found that, ‘due to the short and time limited nature of flash promotions consumers forget about the specifics of the deal and just buy it to avoid missing out’.</i></p>	<p><i>‘Popular pricing methods for our clients are bait advertising and versioning. Basically, having different versions of a product or group on display can increase preferences for the higher or lower tiers; it’s this idea of the middle option, and yes I will admit that it shifts decisions in their favour’.</i></p>	<p><i>‘Freebies is a favourite of everyone, you don’t need to think if the deal is any good you just buy, everyone loves something for free don’t they’.</i> <i>On this point one of the academic participants said ‘BOGOF is also a great strategy but the research has shown that if the price accounts for the ‘free’ item people still buy it. It’s a bit like the 9 effect, people can easily make judgements about product value without due justification’.</i></p>	<p><i>‘Drip pricing products is a great way to increase the spend of the customer, we model many of our promotions in travel around Ryanair’s 99p flights. Attract them and then get them to pay more than they bargained for. It’s a great strategy’.</i></p>

## 2.5.4 Factor importance, moderation effects and relationships in determining decision outcomes for promotions

### Single Factor Importance

Results (see Table 13)

In line with the literature, and indeed unsurprisingly, the academics interviewed had a greater understanding of the relationships between variables, especially those that are behavioural in nature. Both the marketing and strategic interviewees consistently mentioned the price and promotional attributes as necessary. It would, therefore, seem that when combined with the information from the academic participants, a combination of both might be valid. The attribution task revealed those factors that the interviewees considered essential to decision-making both overall (Figure 6) and by their respective segment (Figure 7).

**Table 13.**

Summary of comments made by participants concerning the importance of each decision driver on promotional decisions.

Theme	Participant Number		
	12 (Academia)	16 (Marketing)	4 (Academia)
<b>Single Dimension Importance</b>	<i>'When it comes down to the actual decision, I strongly believe that the price is going to be the most important factor, yes there will be a consideration of other variables, but it will be price and income which will determine if the more expensive product can be bought or not.'</i>	<i>'You know decisions can be made up of a variety of factors, typically; however, I foresee price as being the most important, hence why people love promotions. It is not only the price though, but the expectations we have of them. If the discount does not 'feel' right or offer us 'enough value' it will not be any good.'</i>	<i>'Price is naturally the most important factor, but as we see throughout the literature, the way that we engage with the price essentially determines both our decision and how happy we are with the income.'</i>

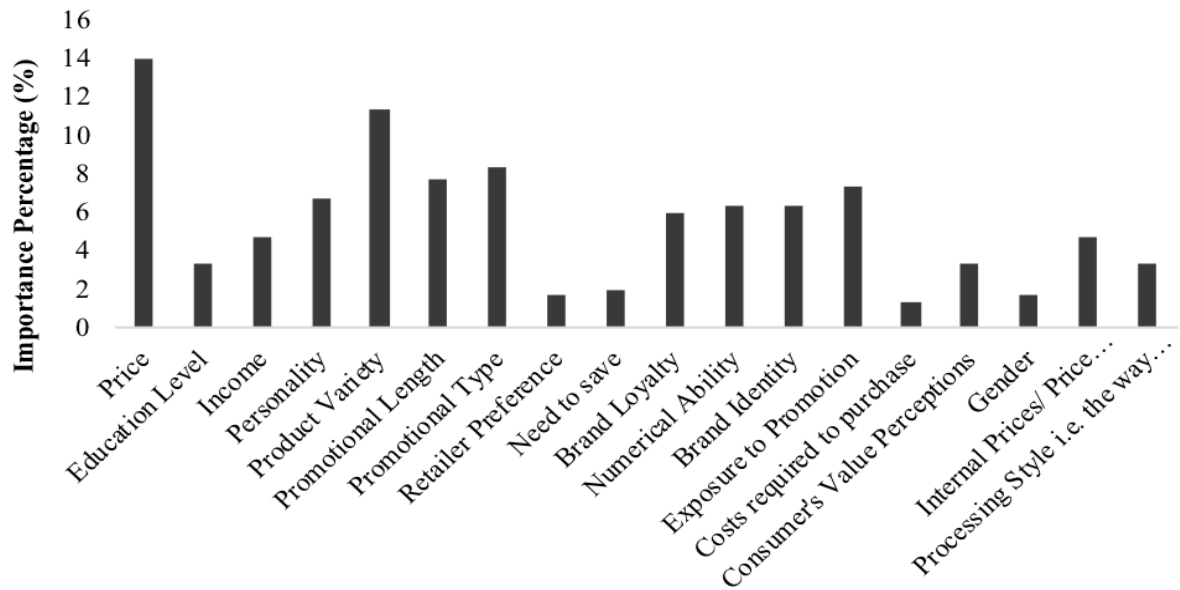


Figure 6. The percentage importance for the dimensions most associated with encouraging effective decisions in promotional contexts, representative of all three segments.

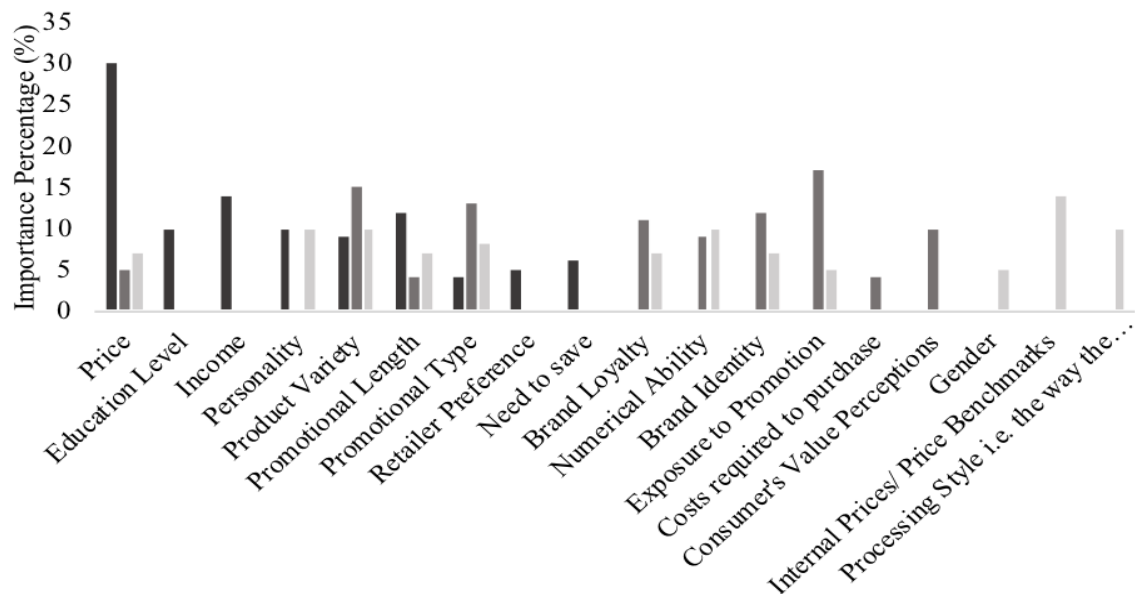


Figure 7. The percentage importance for the dimensions most associated with encouraging effective decisions in promotional contexts, by: ■ Marketers, ■ Business Strategists, and ■ Academics.

All interviewees suggested that because promotions offer either discounts or 'value for money', price and price expectations are the most critical factors driving decisions. Almost all the other interviewees made similar statements, thus confirming that price, how it is processed and price expectations to be the most critical decision factors. This would sit well with the literature that

proposes that the way in which and the extent that a price/stimulus is processed is vital to any decision outcome (Helgeson and Beatty, 1985; Jensen and Grunert, 2014).

### Discussion of theme

According to both the literature and data price is not only the most critical factor in promotional effectiveness but also one of the most important in all purchasing. The notion that price is one of the most common, influential, drivers of promotional decision-making is widely supported by the literature (Ahmetoglu *et al.*, 2014). This is primarily because the price is shown to determine a plethora of product perceptions. One of these is the purchase's value for money which is especially crucial for promotions as it defines how much reward is offered (Zeithaml, 1988). Although previous research has suggested that there are multiple promotional decision drivers, e.g. quality, social recognition, entertainment value or even nutrition Chandon *et al.* (2000) report that 'discounting' practices primarily rely on price. Based on the findings it seems that price is undoubtedly the most crucial factor in driving promotional decisions. Further work will be required to assess if this is the case for all promotional types of discount specific ones.

## **Relationships Between Themes**

### Results (see Table 14)

As can be seen across the interviews a variety of themes were considered important in determining decision-making for promotions. For the most part, the comments and themes mentioned have been equally afforded a degree of importance in the literature. Invariably, price and product variety seem to be the most essential attributes while demographics seemingly less so. The intergroup differences support the notions put forth in the interviews, with academic participants indicating a range of factors important in effective decisions and marketers and strategists focusing less so on behavioural factors. Interestingly, although price and demographics came up consistently, only two of the seven marketers mentioned the influence of processing types and personality on decisions. Moreover, despite only a few of the marketing and consultant participants touching on specific behaviours or traits on many occasions, links were drawn between pricing architecture, the retail environment and general consumer behaviour. Counter to these more generalist referrals to the relationships between themes; the academic participants referred to links between demographics, personality and consumer behaviours in an overall decision framework.

**Table 14.**

Summary of comments made concerning the relationships between psychological dimensions predicting promotional decisions.

Theme	Participant Number				
	13 (Marketing)	6 (Marketing)	11 (Strategy)	20 (Marketing)	2 (Marketing)
<b>Relationships Between Dimensions</b>	<i>'Sure, price is important, but I think the way the consumers actually process and interact with the promotion is just as important to consider when making a strategy. I know that as an organization we like to use typologies in our promotional campaigns and so I think that personality plays a vital role in how good our decisions are'.</i>	<i>'I mentioned something about processing styles and now that links with personality; I often notice that younger, more social people interact with our more flamboyant techy promotions and in surveys seem to recall these better than the oldies'.</i>	<i>'When think about buying promotions I think of three things. One, the consumers' behavior. Two, the promotion itself, which is basically the type, way its been designed, positioning etc. And then, three, the strategic environment. This is basically the marketed conditions, the retail environment and so on. Each interact with each other to help the consumer decide whether or not to buy'.</i>	<i>'The consumer's behavior, history and personality, definitely determines how they interact with a promotion. This is the basic assumption behind building typologies, which we do for every campaign we roll-out'.</i>	<i>'Take bundling for instance, it takes a certain type of customer to like bundles, its typically those preferring quantity over quality, others who love getting value prefer 'freebies' and so on. How we engage with promotions and the marketing campaigns advertising them is down to who we are'.</i>
	Participant Number				
	10 (Strategy)	1 (Academia)	9 (Academia)	12 (Academia)	
<b>Relationships Between Dimensions</b>	<i>'I would say that a decision and the outcome is based on who we are and if we trust the retailer, consider drip pricing, I mean wow, Ryanair's 99p flights! Everyone knows that a flight won't really cost 99p but we trust advertising and marketing cues so we go through the motions and get to the checkout. After all of this we get hit with the mother of all prices and bag charges. It takes a certain type of lazy shopper to just say screw it I can't be bothered to now go and compare prices'.</i>	<i>'in order to understand how consumers make decisions in such contexts, I would suggest that it is not just a few factors at play but a montage of strongly intertwined dimensions. Take demographics for instance; while a few of these may influence how we shop, income determining disposable income for example, the effect of personality is quite equally important I think'.</i>	<i>'The research in the area clearly shows that such characteristics predict the way consumers interact, recall and memorize both products and prices. The promotion itself is vital as it's an environmental stimulus with which we have to interact. All of this is combined with the fact that consumers are expected to accurately rationalize the fairness of prices, which you know is hard when all we care about, at least for essential goods, is getting in and getting out'.</i>	<i>'all socio-demographic traits have some influence, whether it's direct or indirect, on the way that consumers experience purchasing. It is no surprise then that such factors have been linked with personality, which can predict the way people process information and interact with their environment'.</i>	



### Discussion of theme

Summarizing the wealth and complexity of the of potential relationships influencing decision outcomes participant 4 stated that *'there is quite honestly no correct answer to this as these factors may have some relevance given certain contexts. At the most basic level, I guess their personality composition can characterise consumers. Research has shown these can be inter-related in a variety of ways although not always consistently. However, while I am not familiar with what demographics may aid processing, personality I am sure has been shown to. This processing style helps determine how we interact with the environment, so I would say that this would help determine how we remember and evaluate prices both now and in the future. All of this, however, can be determined by the promotional practice and basic underlying decision theories used to explain their bias. More interesting to me as a psychologist though are the behavioural elements, such as brand loyalty and how this loyalty warps our rational inclinations for baser, hedonistic desires'*.

Unsurprisingly, price and price expectations were factors cited as most important in driving promotional decisions. However, when considering how the themes inter-linked to help define decision utility the findings are less clear. This is primarily because the only data offering any depth to this theme came from the academic respondents. Since the academic participants are familiar with the literature in the field, it is more than likely that their opinions are conditioned by the same literature presented in the introduction. As such, their comments significantly aligned with the presented models (e.g. Laroche *et al.*, 2003) suggesting a trait-based, cogno-affective approach to promotional decision-making.

Summarizing the comments, it was suggested that demographics and personality form the basis of our behaviour. Equipped with these pre-dispositions and empowering traits, e.g. financial literacy consumers begin the purchase decision using cognitive mechanisms. Processing the information and using internalised prices to form judgements consumers quickly attempt to gauge the value of the purchase. Intertwined with this process is an affective dimension, commonly defined by the relationships consumers have with a brand. These relationships invoke trust, which according to the comments and literature leave consumers open to marketing ploys. Through this combination of cognitive processes and affective decision drivers, a decision is made, and utility obtained. The literature and interview data, therefore, support the cogno-affective theory (Laroche *et al.*, 2003).

In contrast to the comprehensive and affirming responses provided by academics, those from the marketing and consulting segments were less consistent. These responses also demonstrated an apparent lack of understanding of the influence and extent of the behavioural factors involved in determining a decision. Responses from these segments are likely to stem from learnt best practice and market-defined factors, e.g. market maturity. This is supported in that participants from both segments consistently noted that their practices revolved around sales data and that they had little knowledge of the influence of behavioural elements. Interviewee 10 stated: *'To be honest, I know that there are many behavioural elements that I am missing but our practices revolve around the analysis of sales data, and so we primarily base our practices on demographics and econometric models'*. However, while it is generally expected that marketers and strategists would have less knowledge of the academic findings, they did align with academics on the relationships between some themes. Among these, it was agreed that price expectations were linked with brand relationships and demographics. It was also agreed that *'the effectiveness of consumer decisions is largely a bi-directional mix between socio-demographics and promotional attributes after all these attributes are the way consumers see promotions and they are designed by us to target that specific consumer group'* (Interviewee 11).

Offering insights that the academics rarely touched upon, the marketing and consulting participants did draw strong links together between the architectural and environmental factors and decision outcomes. Expressly, the comments of these participants generally agreed that the way a price is framed is a strong determinant of sales. Similarly, they also agreed that the price framing method and environmental conditions interact with a consumer's behaviour to determine what, when and why to purchase. However, very few specific behaviours were consistently identified nor prescribed in a linear form to help define a decision process. Among the few comments, some participants mentioned that demographics and personality formed the basis of our behaviour, while others also mentioned the importance of engaging with the information. Because the descriptions of the relationships were less consistent among these sub-groups, it is difficult to draw any behavioural conclusions. Instead, then, it is worth considering how the price framing and environmental factors moderate the cogno-affective model of decision-making and define decision utility. This moderation effect is suggested throughout the literature. For instance, it is supported that our behaviours determine how we engage with and evaluate different price framing methods, which in turn defines the outcome and utility of our decisions (Xia, Monroe and Cox, 2004).

## 2.6 Discussion

This chapter went about attempting to highlight the psychological and behavioural factors that could be influential in promotional decision making. Of the novel research in the area, the cogno-affective theory (Laroche *et al.*, 2003) was one of the first vital attempts to understand the effect of consumer psychology on promotional behaviour. While true that the theory of deal proneness literature preceded the creation of this theory, the deal proneness theory relies on a combination of demographic and personality traits to describe promotional behaviour. In contrast, the cogno-affective model runs in parallel with the proposed three-step model of decision making proposed by Einhorn and Hogarth (1981) and accounts for the importance of a plethora of other psychological constructs, e.g. information processing. The importance of the cognitive and affective elements in decision making was strongly supported in the more general field of decision-making and consumer psychology. Both of these offered further indications that some specific traits and behaviours could bias a decision from a cogno-affective perspective. The use of intuition, without relevant experience, is an example of this.

Surmising the comments, findings from the literature strongly aligned with the comments extracted from the experts interviewed. At the most overarching level, a consumer's behaviour and retail-driven factors (e.g. the method of price framing) were proposed as the most important factors predicting decision outcomes. Within these two overarching themes, strong relationships between interpersonal factors (e.g. income, gender and social class), personality, consumer cognition (i.e. information processing) and consumer behaviours (e.g. brand loyalty) were described as helping to determine two behaviours - how consumers interact with the purchase environment and how the product in question is evaluated. Concerning the former, demographics were suggested to predict the type of environment consumers purchase in (e.g. low-income families shopping at discounters) while personality and the method of information processing with how the environment is perceived and engaged with. For example, being conscientiousness and cognitive can equate to a thorough evaluation and engagement of the purchase environment. Furthermore, the method of information processing and other emotive driven behaviours (e.g. brand relationships) were suggested to influence why and how a product is chosen. Based on these generalisations, the notion that consumer behaviour can influence promotional decision making the question seems supported.

Alongside these psychological determinants of decisions, promotional attributes and the promotional methods represented environmental decision drivers. Each of these promotional attributes

is suggested to have their unique effect on the outcome of the decision. For instance, how the promotion is framed, e.g. 'freebies' or discounts influence the way consumers perceive the potential reward of a promotion. Likewise, promotional attributes, e.g. the length of the promotion or constituent items can increase the likelihood of purchasing (Darke and Freedman, 1993; DeIVecchio, Krishnan, and Smith, 2007; Diamond and Campbell, 1989; Diamond and Johnson, 1990; Sinha and Smith, 2000).

Although the literary findings and interview responses aligned the Einhorn and Hogarth's (1981) three-step evaluative approach and Laroche *et al's.*, (2003) cogno-affective theory, the findings presented here have two main problems. First, despite the fourth and final question directly questioning the relationships between themes, only academic participants fully understood and were able to answer the question with fluency and depth. In the instances where participants did not elaborate enough on these relationships, it may have been better to invite or direct them to do so. Alternatively, it may also have been prudent to use a mix of both closed and open-ended questions. In this scenario, initial questions could have remained open-ended, to get the interviewees to think about the topic, before asking them more direct questions to help them think about how individual aspects of themes, e.g. extraversion in personality interact to determine the choice. While the composition of the questionnaire could have been improved, naturally a more comprehensive selection of interviewees would also have been beneficial. Although all 20 participants were reputable and highly experienced in the promotional field, interviewees from areas such as consumer data analytics and consumer insights would also have been useful. These interviews were also further limited by the time limit, a factor that could have been improved upon if not for the seniority of the cohort.

Second, the extent and validity of the relationships between themes are yet to support in the promotional literature. As this thesis aims to uncover how promotions can influence decision-making and its outcomes, it seems equally important to consider how a consumer's psychology implicates this process. To address this research gap, the interaction between consumer behaviours and promotional practices on decision utility needs to be empirically and quantifiably determined. As such, a series of investigations will be needed to validate the findings and potential relationships between themes derived from both the interviews and the literature. From this, it should become clear if there is any significant difference in obtained utility between the ways that consumers' process, internalise and interact with different types of promotions. Moreover, testing these relationships will help to uncover the primary elements that can bias consumer decisions, in effect empowering consumers with knowledge of their

flaws. Research of this nature will not only serve to address a pressing theoretical gap but have applied implications too. For instance, successfully building a framework of promotional decision-making that incorporates psychological elements will undoubtedly help marketers to establish which typologies can best be targeted when developing promotional advertisements. From an academic perspective, this will be the first research to bring together the four most common promotional methods in this way, helping to develop the psychological literature in this area. Not only validating previous findings and typologies, but the framework will also extend the literature by testing many of the implied relationships yet to be directly investigated.

To test the validity of the relationships between themes on promotional decision outcome, the proceeding chapters incorporate two essential phases. The first phase aimed to ascertain the validity of each conceptual relationship as defined by Einhorn and Hogarth's (1981) three-step model and the cogno-affective theory. While the literature and interview data has found support for the underlying psychological/behavioural elements driving each of these theories, quantitative data in a promotional context is needed. For instance, despite the literature showing that NFC and FII influence decisions in the more general consumer research (Moxley, Ericsson, Charness and Krampe, 2012), little is known about their effects in promotional contexts. Consequentially, each causal relationship suggested in this chapter will undergo testing. Some dimensions, i.e. demographics, personality and promotional practices, are tested across all investigations. See Figure 8 for an overview of the relationships being tested.

The second phase will evaluate and test a comprehensive framework of promotional decision-making based on the findings from the first phase. Using a testing procedure that aims to mimic real retail settings, an additional aim is to make the testing procedure as universally valid and replicable as possible. Since this is exploratory work, a primary aim of this model will be for future scholars to utilise and develop these findings in future research.

Einhorn & Hogarth (1981)	Laroche <i>et al.</i> , (2003)	
Stage 1	Cognitive	<b>CHAPTER 3:</b> Personality & Demography > Methods of Info. Processing > Promotional Decision Utility
Stage 2	Cognitive	<b>CHAPTER 4:</b> Methods of Info. Processing > How Prices are Processed > Promotional Decision Utility
Stage 3	Affective	<b>CHAPTER 5:</b> How Prices are Processed > Power of Brand Relationships > Promotional Decision Utility
Overall Decision		<b>CHAPTER 6:</b> Personality & Demography > Methods of Info. Processing > How Prices are Processed > Power of Brand Relationships > Promotional Decision Utility

*Figure 8.* Overview of the psychological relationships needing testing in relation to promotional decision-making

# CHAPTER 3 – DUAL PROCESS MODELS ON PROMOTIONAL DECISION UTILITY

## 3.1 Chapter Overview

As has been shown, there is a considerable gap in the literature concerning how promotions and consumer psychology impact decision-making. This chapter considers the first of the evaluative processes important in deciding on a product from a consideration set, the processing of the stimuli. As was described in **Chapter 2**, the cogno-affective theory proposed by Laroche *et al.*, (2003) incorporates a cognitive dimension that comprises two components, information processing and price evaluation. Both components help define promotional behaviour, with information processing being cited in the wider consumer literature as the first and most vital part of evaluating decisions (Einhorn and Hogarth, 1981). More recently, the method and efficacy with which information is processed has also consistently been found to influence both the accuracy and utility derived from a decision.

Dual process models suggest that there are two modes of processing, either cognitive or intuitive. These modes are commonly measured via scales of ‘Need for Cognition’ (NFC) and ‘Faith in Intuition’ (FII) respectively. At times, expert decision-makers can use both, depending on the decision context. By and large cognitive decisions are thought to improve decision utility while intuitive ones reduce it (Sirgy, Johar and Wood, 2015). However, recent findings suggest that intuitive decisions, in light of personality, experience and financial literacy, can actually be more efficient and accurate (Shanteau, 1988; 1992).

As was highlighted in **Chapter 1**, promotions can significantly impact the outcome of a decision. Moreover, each practice has its own theoretical foundation that invokes similar but slightly different effects on the outcome. Importantly though, promotions present consumers with a price stimulus that needs to be processed. Since promotional purchasing is often impulsive, consumers are likely to experience the promotional price or attributes equally as spontaneously. Research suggests that stimuli experienced in an impromptu way are unlikely to be given sufficient consideration and this may affect a decision outcome (Oppenheimer and Kelso, 2015). The way in which intuition or cognition help to determine a utilitarian outcome when faced with promotional stimuli is as yet unexplored. Furthermore, there is little research comparing the bias resulting from each practice,

either alone or in light of the processing method. Additional moderators of the information processing methodology, such as experience and financial literacy, have also not been considered.

This chapter addresses these gaps by highlighting how NFC and FII influence decision utility when 'monetary value' is the primary attribute of utility. The moderation effects of financial literacy and consumer experience will also be highlighted. Given the link shown in the literature between cognitive styles and personality (Hess and Bacigalupo, 2011; Pacini and Epstein, 1999), it is hypothesised that conscientiousness will positively correlate with NFC while extraversion and agreeableness will show a relationship with FII.

Financial literacy and experience may predict the predominant use of a single method of information processing (Fox *et al.*, 2005). Specifically, consumer experience and financial literacy have been found to increase the occurrence of FII and intuitive decisions (Evans and Stanovich, 2013). Furthermore, it has been predicted that financial literacy will have a significant interaction with both FII and NFC, although the direction of such relationships is not entirely clear. Given the vast body of work highlighting the accuracy of intuitive decisions, it could be suggested that when combined with higher financial literacy, participants are less likely to make utilitarian decisions. The influence of demographics should also be considered, as gender, socio-economic status and educational attainment may be significant factors in decision-making. In light of the literature, it can be assumed that intuitive decisions, combined with experience and financial literacy, will help consumers obtain the most utility.

### **3.2 General Introduction**

Utilitarian purchase outcomes are those which offer the consumer the greatest reward, as defined by their purchasing objectives. To obtain the most utilitarian purchase outcomes, consumers need to assess price fairness accurately. Price fairness is defined as the similarity in a product's price with that offered by other retailers. Scholars suggest that to make fairness evaluations successfully, consumers use different mechanisms to process purchasing information: some rely on intuition, others use cognition.



Previous research has conceptualised intuitive and cognitive processing as FII and NFC. While each method can improve decision efficacy, it is apparent that an over-reliance on one method can hinder decision-making (Agarwal and Mazumder, 2013; Fox *et al.*, 2005; Howells, 2005; Suri, Monroe and Koc, 2013). For instance, a dependence on cognition leads to cognitive load, which hinders the proper processing and evaluation of all relevant purchase factors (Lichtenstein *et al.*, 1990; Schneider and Currim, 1991). By contrast, a consumer who has confidence in their intuition, can lead to the use of heuristics. Should this be the case, consumers may base decisions on inferences (e.g., promotions always offer value) that actually offer little outcome certainty (Howells, 2005). This is especially true in the absence of good purchase experience or financial literacy, which consumers can use to effectively calculate and evaluate price fairness (Fox *et al.*, 2005; Howells, 2005). Furthermore, failure to acknowledge and evaluate all relevant decision factors can leave consumers open to marketing ploys (Ahmetoglu, Fried, Dawes and Furnham, 2010).

One of the most common marketing ploys is price promotion, which entices consumers with monetary savings despite often offering them little real value. Research has found that consumers infer that they can make savings from bundled ski packages, despite the price being the same as an unbundled package (Arora, 2008). Broader research on promotions has generally reported similar findings and it appears that the implied value associated with the word 'promotion' acts as a significant purchase driver (Ariely, 2008; Shampanier and Ariely, 2006). Therefore, in order to assess a promotion's validity accurately, consumers need to engage with its price and value cognitively.

However, notwithstanding the increasing popularity of price promotions both in the literature and in practice (Ahmetoglu *et al.*, 2014), few papers have considered how FII or NFC influence the utility of promotion-based decisions (Aydinli *et al.*, 2014). Given this gap in the knowledge, this Chapter explores the effects of FII, NFC, financial literacy and purchase experience in promoting utilitarian promotional decisions that lead to a 'value for money' (VFM) outcome.

### **3.3 Literature Review**

As previously discussed, dual-process models conceptualise decision-making into two thinking styles (Haugtvedt *et al.*, 1992), NFC and FII. Attempting to ascertain 'at what depth' rather than 'what or why' a choice is made, these models focus on how customers process and evaluate potential transactions (Evans, 2003; Glaser and Walther, 2013). Having gained considerable support in the

general decision-making literature (Glöckner and Witteman, 2010), dual-process models offer a new way to consider price processing. Importantly, they depart from more traditional neuro-scientific elaboration likelihood models (ELM) that fail to account for individual differences.

Like dual-process models, ELM theorists posit that separate product attributes are processed differently. The theory suggests that the primary features defining a product's value are predominantly processed centrally and with consciousness, whereas hedonistic, emotive attributes such as product colour are processed peripherally (Petty and Cacioppo, 1986; Voss, Spangenberg and Grohmann, 2003). However, this is moderated by a consumer's psychology. For instance, Chen and Lee (2008) found that the personality trait of conscientiousness increases the amount of information and attributes that are centrally processed. Similarly, occupation also defines the attributes considered necessary in a decision, with, say, a graphic designer processing design and colour as centrally as other attributes. From this, it has generally been concluded that ELM models are subject to many behavioural moderators that vitiate any population-wide predictions that can be made from this framework (Lagerkvist, 2013; Mantel and Kardes, 1999; Townsend and Kahn, 2013). In contrast, dual-process models hold that NFC and FII are personality traits, and thus provide more stable, consistent measures of information processing (Haugtvedt, Petty and Cacioppo, 1992). These traits will now be discussed in more detail.

### **3.3.1 Need for Cognition**

NFC is the desire to thoroughly process all decision-related attributes while reflecting an inherent need to actively use cognition when making decisions. Given that NFC has been consistently associated with increases in central processing (Cacioppo, Petty, Reinstein and Jarvis, 1996), consumer-related research suggests that NFC may help to maximise purchase utility (Dickhäuser and Reinhard, 2006; Haddock *et al.*, 2008; Petty, Briñol, Loersch and McCaslin, 2009). For example, Liao, Lin, Luo and Chea (2017) showed that the cognitive processing and evaluation of purchase choices improves not only post-purchase satisfaction but also perception of product quality. This finding is generally well-supported (Bartels and Johnson, 2015). NFC also increases the accuracy of price fairness evaluations if strong directional pricing prompts, such as 'get this great deal NOW', are used (Cacioppo, Petty and Kao, 1984; Dillar *et al.*, 2007). Moreover, for those consumers who regularly seek and redeem promotions, NFC is a fundamental tool in helping obtain the greatest value for money across a range of purchase contexts (Burman and Biswas, 2004). From this, it can be

concluded that NFC may promote promotional-based decision utility through the more cognitive consideration of personal preferences, inventory needs and price fairness (Frederick, 2005; Verplanken and Sato, 2011).

Despite the typically positive effects of NFC on utilitarian decision-making (Carnevale, Inbar and Lerner, 2011; Smith and Levin, 1996), this relationship is moderated by a sensitive equilibrium between cognitive capacity and good decision-making (D'Agostino and Fincher-Kiefer, 1992; Kuvaas and Kaufmann, 2004). Cognitive load, the use of cognition beyond someone's capacity, unbalances this relationship and is clearly associated with biased decision-making (Malhotra, 1982; Schwarz, 2004). Bias arising from more emotive consumer-dependent sources, such as strong brand loyalty, becomes prevalent when consumers experience high cognitive load (Haddock, Maio, Arnold and Huskinson, 2008; Petty *et al.*, 2009). Overthinking the purchase can lead consumers to accept a product's price based on loyalty rather than utilitarian benefit, resulting in a fallible decision outcome (Carroll and Ahuvia, 2006).

Similar effects may also stem from previously unimportant decision factors, such as package design (Silayoi and Speece, 2007), and are considered to result from a consumer's personality. Conscientiousness and neuroticism have been found to increase decision-making involvement and NFC. Both also encourage consumers to process multiple unwarranted product attributes (Hess and Bacigalupo, 2011; Smith and Levin, 1996). Overall, while NFC may be useful when information is abundant, it actually hinders decision-making in situations that involve multiple decisions, an extensive product selection and a lack of information (Gigerenzer, 2007; Gigerenzer and Gaissmaier, 2011).

### **3.3.2 Faith in Intuition**

FII is the confidence that consumers have in their ability to acquire knowledge without inference or use of reason. Importantly, FII and all other intuition-based processing have been associated with heuristics (Broniarczyk and Alba, 1994; Gigerenzer and Gaissmaier, 2011). As previously discussed, heuristics are practical mental shortcuts based on past purchasing experience that can intuitively guide consumer choices with minimal cognitive effort (Rerup, 2005). However, despite being cognitively economic, heuristics are usually responsible for a significant proportion of variance in consumer

decision bias (Alós-Ferrer and Hügelschäfer, 2012; McElroy and Seta, 2003; Tversky and Kahneman, 1981). In fact, even the most straightforward consumer heuristics of price and quality, promotions and VFM, lead consumers to make quick decisions based on inference alone (Ahmetoglu *et al.*, 2014). Unsurprisingly, then, consumers readily accept promoted product bundles despite the fact that they frequently offer no utilitarian value (Johnson, Herrmann and Bauer, 1999; Yandav, 1994). Therefore, intuition-based decisions are commonly considered to be bias-prone and less accurate than cognition-based decisions (Kahneman and Tversky, 1977; Sadler-Smith and Shefy, 2004).

The negative connotations of intuition-based decision-making revolve around a perceived co-dependency between heuristics and intuition (Pretz and Totz, 2007; Shiloh, Salton and Sharabi, 2002). Despite being similar, the relationship between the two is not necessarily mutually exclusive (Broniarczyk and Alba, 1994; Epstein, Pacini, Denes-Raj and Heier, 1996; Shiloh *et al.*, 2002). Although a consumer may possess a strong promotion-value heuristic, experience-based intuition may deter them from accepting promotions from ‘untrustworthy’ retailers. When deal-prone consumers (Blattberg, Buesing, Peacock and Sen, 1978; DelVecchio, 2005; Webster Jr., 1965) are primed with negative retailer associations, they tend to be more sceptical about promotional value (Jones, Reynolds and Arnold, 2006). Similarly, a combination of consumer experience and confidence in intuitive abilities could improve decision-making skills and be more effective than using cognition alone (Dijksterhuis *et al.*, 2006; Gigerenzer, 2007; Gigerenzer and Gaissmaier, 2011; Hutton and Klein, 1999). If accurate, this would suggest that some forms of intuition-based reasoning are actually beneficial.

### **3.3.3 Experience and Financial Literacy as Empowering Traits**

Since the early support of FII, research has continued to document the positive influence that intuition has on utilitarian decision-making (Miller and Ireland, 2005). These effects, commonly attributed to expertise and competence factors such as financial literacy, are illustrated by research on financial decision-making. In a study of stock portfolio managers, subjects were able to retrieve and apply intuitively complex patterns from their previous experience and use this knowledge to aid in picking superior, well-performing stocks (Glaser and Walther, 2013; Kempf, Erhun, Hertzler, Rosenberg and Peng, 2013). While little research has extended the study of FII-based intuition into retail contexts, it is possible that such expertise may be conceptualised using purchasing experience. In support of this theory, consumer experiences have been shown to encourage the proper internalization of product

prices (Sladek, Phillips and Bond, 2006), which are then accessed at a later date to assess a price's fairness. As an increase in consumer experience leads to quicker, more thorough, evaluative price comparisons (Rose *et al.*, 2012), experience is considered to be an essential driver of utilitarian decision-making (Hausmann, 2000).

Like consumer experience, financial literacy is a competence factor when evaluating cross-retailer price equality and is considered a trait of consumer empowerment (Williams, 2007). It refers to the fluency with which an individual can evaluate financial and price-related data (Lusardi, 2008; Suri *et al.*, 2013). Even though it can promote the maximization of utility through an accurate evaluation of transactional, depreciative, and travel costs (Clark and d'Ambrosio, 2008; Fox *et al.*, 2005; Howells, 2005), most studies have found population-wide financial illiteracy in specific consumer segments, particularly African-Americans, females and lower socio-economic classes. Furthermore, in a nationally representative sample, only 50% of participants could divide \$2 million by five (Bernheim, 1995, 1998; Lusardi and Mitchell, 2007; Smith and Stewart, 2008). Research on the relationship between information processing and cognition suggests that people with lower levels of financial literacy are more likely to exhibit higher NFC, especially if they wish to maximise utility (Bodnaruk and Simonov, 2012; von Gaudecker, 2011). However, the extent to which financial literacy aids in the evaluation of pricing promotions is yet to be explored.

When considered together, financial literacy and purchase experience positively interact in increasing decision utility (Lusardi 2008). Exploratory studies suggest that financial literacy can overinflate self-confidence in intuitive decision-making abilities, which could bias decisions unless a significant experiential component is present (Häubl and Trifts, 2000; Lusardi, 2008). For example, financial literacy leads to an increase in risk-prone investment decisions, while a combination of financial sector experience and literacy results in investments with lower risks but higher returns (Hassan Al-Tamimi and Anood Bin Kalli, 2009; Van Rooij, Lusardi and Alessie, 2011).

Research suggests that a consumer with heightened purchasing experience and literacy can optimise intuitive decision-making competence, as they will have a better understanding of when and how to use intuition correctly. This hypothesis led some scholars to suggest that the 'best' decision-makers know their own abilities, use intuition when their experience permits, and use cognition when they lack experience (Moxley *et al.*, 2012; Raju *et al.*, 1995). Therefore, while intuition and cognition

appear to be opposites of each other, they do not necessarily negatively correlate, as decision-makers can be both intuitive and cognitive (Petty *et al.*, 2009).

### **3.3.4 NFC and FII in promotional contexts**

No studies appear to have considered NFC and FII in promotional decision contexts. Research in this area could help to develop and deepen our understanding of how consumers engage with promotions at the point of sale. One of the principal purposes of promotional strategies is to increase the perception of VFM, irrespective of whether actual utility is gained (Ahmetoglu *et al.*, 2014). Whilst in practice, promotions generally do offer monetary value, it appears that fallible price promotions, which confer no price-related value, are equally readily accepted (Khan and Dhar, 2010; Cho, Khan and Dhar, 2013).

The level of input required by consumers varies among the price framing methods. Drip priced products need a multitude of calculations and time investment at the point of sale (Hamilton and Srivastava, 2008). The same holds true of bundling, which requires price deviation and evaluations as a function of the number of constituent products (Ahmetoglu *et al.*, 2014). In contrast, other methods, such as value-based pricing or promotions offering ‘freebies’, demand less calculation and are therefore preferable (Darke and Chun, 2005). However, these methods still require some evaluation. In the case of value-based promotions, e.g., ‘was £100, now £80’, the consumer needs to know whether the originally advertised price is correct (López-Casasnovas and Puig-Junoy, 2000). Similarly, with regard to ‘freebies’, consumers need to consider the truth of the ‘free’ statement and determine whether the promoted price has actually been inflated (Ariely, 2008).

Despite apparent differences between each practice in the cognitive requirements needed to evaluate prices, in actual fact the same combination of traits is required for accurate evaluation, irrespective of the promotional method. Thus, when faced with any of the ‘big four’ promotional methods a degree of financial literacy, experience, and a contextually appropriate processing style is needed to help guide the decision-making process. Given that this is a combination of traits that many consumers lack (Lusardi and Mitchell, 2007; Smith and Stewart, 2008), we might imagine that those who rely on intuition but lack both experience and financial literacy will be particularly susceptible to promotional ploys. Testing this notion is the primary focus of this chapter.

### 3.3.5 Study aims and hypotheses

This study aims to investigate the first evaluative process in a purchase decision, namely the processing of the stimuli. Explicitly, it considers FII and NFC amid hitherto unexplored promotional decision contexts. Decision utility is defined from a price perspective, with an economically satisfactory decision that maximises VFM, relative to the market's average regular retail price (RRP). As promotions are predominantly aimed at providing consumers with VFM (Ahmetoglu *et al.*, 2014), it seems logical that price should be considered the most important of the decision factors. Therefore, an economically unsatisfactory, or biased, decision reflects a decision that does not maximise VFM.

By examining the existing literature, several hypotheses can be formed. First, at a consumer level, conscientiousness and neuroticism appear to influence decision involvement; therefore, it is predicted that personality-type traits positively correlate with NFC (H<sub>1</sub>). Concerning dual-process models, it is hypothesised that FII, combined with experience and financial literacy, will positively influence decision utility to a greater degree than NFC-based thinking (H<sub>2</sub>). As financial literacy and purchasing experience empower decision-making (Howells, 2005; Rerup, 2005), a positive interaction of both is expected to promote utilitarian decision-making (H<sub>3</sub>).

In addition, decision utility is predicted to differ as a function of promotional practice, as suggested by the literature. Specifically, while BOGDIF and value-based promoted items may be the most attractive from a purchasing perspective (H<sub>4</sub>), drip pricing and bundling are hypothesised to promote fallible decisions, due to the complexity of the evaluations required to assess their utility (H<sub>5</sub>). As BOGDIF and value-based pricing are still promotions, they are predicted to be preferable to non-promoted items and therefore will have the potential to bias decisions (H<sub>6</sub>). As both drip pricing and bundling require numerically complex price-related calculations (Gabaix and Laibson, 2006), financial literacy is expected to be an especially significant covariate of these effects (H<sub>7</sub>).

## 3.4 Method

### 3.4.1 Participants

A demographically diverse sample ( $n = 246$ ) of employed, family-oriented, UK based adults formed the cohort for this investigation. Participants were recruited via the Qualtrics online research database. No other significant exclusion criteria were applied. Demographic information indicated that the cohort tended to be middle-aged ( $M = 52$ ,  $SD = 16.6$ ) and had almost equal numbers of men and

women (51% male, 49% female). Subjects were predominately from the middle social class (37%), educated to at least high school level (74%) and earned, on average, between £28,000 and £34,000. There were considerable differences in purchase intentions across promotional practices. On average, purchase intentions were greatest for items priced under BOGDIF ( $M = 21.2$ ,  $SD = 5.3$ ) and lowest for non-promoted (control) items ( $M = 12.5$ ,  $SD = 4.17$ ).

### 3.4.2 Design and Apparatus

An experimental within-subjects design was used to administer a 37-item, multi-faceted survey, comprising four tiers: demographics/personality, processing styles, financial literacy and purchase intentions. Both the NFC and FII segments of the 'Rational Experiential Inventory' 10 (REI-10) were adopted from previous research (Norris, Pacini and Epstein, 1998) and consisted of five items using 9-point Likert judgement measurements (*see* Appendix 4). The overall scale was found to have a significant reliability of  $\alpha = 0.89$ , in line with the larger 40-item measure (REI-40; Pacini and Epstein, 1999). Confirmatory factor analyses using principal axis factoring and direct-oblimin rotations revealed that each scale's five items loaded significantly into single-dimension constructs (*see* Appendix 5). The five items loaded onto the NFC dimension accounted for 51.5% of the variance while those loaded onto the FII dimension accounted for 78% of the variance.

A four-item consumer experience scale, with a reliability of  $\alpha = 0.90$ , was adopted from Wallace, Giese and Johnson (2004) (*see* Appendix 6). Combining the scale with three additional questions ('When it comes to purchasing, how do you rate your experience at... knowing your products, knowing their real price, and knowing where to find them?') broadened the scope of the measure. The overall measure attributed significant reliability ( $\alpha = .76$ ) and factored into a single dimension labelled 'consumer experience' which accounted for 79% of the variance.

Personality was measured using a brief measure of the 'big five' known as the ten-item personality index (TIPI - Gosling, Rentfrow and Swann, 2003 - *see* Appendix 7). Although somewhat inferior to larger personality instrument, the measure is considered useful in designs with complex and lengthy measurements (Muck, Hell and Gosling, 2007). Since there are only two questions that measure broad domains e.g. extraversion reporting alphas is thought to be misleading (Kline, 2000; Wood and Hampson, 2005). Financial literacy was determined using and Morwitz, 2005). Financial literacy was determined



using five numerical reasoning items, which varied in complexity but were relevant to consumer decisions. Items such as ‘What is the unit price of a bundle of three products, in which each item is equally priced, and the total is £6.50?’ were taken from actual promotional scenarios.

To test for decision utility, three within-subject pricing conditions were created: maximum utility, equitable utility and depreciative utility, all of which differed in overall price savings relative to average RRP. For each item, more than 10 prices were collected and averaged to give the item a market ‘fair’ price. This price fluctuated by 5% as a function of the pricing condition. In the maximum utility condition, prices decreased, thereby reflecting ‘utilitarian’ prices whereas in the depreciated condition, an increase in prices suggested ‘fallible’ prices. Each of the five products in question (see Table 15) was allocated a promotional condition based on actual, recent promotions (see Appendix 2 for promotional framing descriptions). To validate differences in purchase intentions for each product, six like-for-like variants, two for each pricing condition, were chosen. The product variants differed on one rudimentary, insignificant attribute, such as the title of a DVD.

To present the participants with the market representative RRPs, a five-page digital product and promotional infomercial were designed. The colour scheme predominantly used red, green and yellow to distinguish the branding from any of the large grocery retailers in the UK. RRPs of both products and promotions were market averages, with the promotional messages a market standard red and white. By using a large superstore such as a Tesco Extra as the retailer, brand names, product attributes and retailer typology were controlled for.

The purchase intentions for each promotion, i.e. the outcome measure, was measured on a four-item, seven-point scale (*highly unlikely – highly likely*), which had an average reliability of  $\alpha = 0.89$  (Chandran and Morwitz, 2005). Items such as ‘How likely are you to buy the product on offer?’ and ‘What chance is there that you will buy this product?’ measured both probabilistic and direct purchase intentions. Given the significantly fewer stimuli experienced by participants in comparison to real

consumers, a five-second time limit was provided for each purchase decision, rather than the suggested browsing time of 5–20 seconds (Stahlberg and Maila, 2012). Moreover, unrelated two-minute filler videos were used in between judgements and before subsequent decisions, to mimic retail settings and exposure to additional stimuli.

**Table 15.**  
Summary of promotional products used in the study

Products used for all promotional methods	RRP	Promotion
Ready Meal for Two	£8.99	Value-Based Pricing
Stainless Steel Cutlery Set	£45.00	Drip Pricing
700 ml Luxury Gin	£15.99	Control
Luxury Meal Deal (Sandwich, snack and drink)	£4.99	Bundling
DVD + 3D glasses	£9.99	BOGDIF

### 3.4.3 Procedure

Participants began by studying the promotional flyer containing both the items and the promotional RRP for up to four minutes, after which they self-reported traits for NFC, FII and financial literacy. After a two-minute filler video, subjects were presented with a purchasing scenario: a mid-priced superstore, in which they were encouraged to purchase items. All participants were told that their main purchasing determinants should be price and obtaining ‘value for money’. Participants were then given five seconds to indicate their purchase intentions for each of the promoted products, randomly picked from the three pricing conditions. After a two-minute filler video, the same process was repeated until purchase intent had been provided for all 30 items (2 items for the 3 pricing conditions across the five promotions).

### 3.5 Results

The statistical analysis was undertaken using SPSS 13 and began by considering the potential relationships between the independent and dependant variables. Correlations indicated a positive relationship between conscientiousness and financial literacy ( $r = .271, p < .001$ ); yet contrary to the literature, had no correlation with NFC ( $r = .04, p < .558$ ). In support of previous findings, FII positively correlated with consumer experience ( $r = .656, p < .001$ ), with NFC and FII correlating ( $r = .337, p < .001$ ): confirming the notion that consumers can be both intuitive and reliant on cognition.

Financial literacy, which was positively correlated with FII ( $r = .198, p < .02$ ) and negatively correlated with NFC ( $r = -.156, p < .025$ ), was found to negatively correlate BOGDIF ( $r = -.168, p < .02$ ) and value-based ( $r = -.164, p < .02$ ) purchase intentions. Taken together, these findings suggest that financial literacy reduces purchase intentions for both reward and monetary-based promotions. No significant correlations were observed between promotional purchase intentions and consumer experience. Finally, regarding the direct effect of dual-processing theory on purchase intentions, FII was found to positively correlate with all promotion-based purchases, especially drip ( $r = .277, p < .001$ ) and bundling pricing ( $r = .267, p < .001$ ).

Pairwise t-tests were used to ascertain significant differences for within-group promotional purchase intentions (Table 16). Purchase intentions were found to be significantly different between practices; BOGDIF purchase intentions ( $M = 21.1, SD = 4.18$ ) were significantly greater than those for bundled ( $M = 15.2, SD = 5.13$ ) items ( $MD = 6.01, t = 27.25, p < .001$ ). Confirming the hypotheses, BOGDIF increased purchase intentions more than any other practice. Intentions for drip-priced items were the lowest, but marginally exceeded those of the control ( $M = 6.01, t = 27.25, p < .001$ ).

**Table 16.**

Pairwise t-tests illustrating the differences in purchase likelihood among promotional methods

	Mean Difference (MD)	Std. Deviation (SD)	t	Sig. (2- tailed)
BOGDIF vs. Drip Pricing	6.80	3.51	39.77	<b>.000</b>
BOGDIF vs. Bundling	6.01	3.26	27.25	<b>.000</b>
BOGDIF vs. Value-Based Pricing	2.65	3.37	11.64	<b>.000</b>
BOGDIF vs. Control	8.67	4.69	27.33	<b>.000</b>
Drip Pricing vs. Bundling	-0.80	3.25	-15.55	<b>.05</b>
Drip Pricing vs. Value-Based Pricing	-4.2	3.57	-28.06	<b>.000</b>
Drip Pricing vs. Control	1.90	4.48	-2.52	<b>.025</b>
Bundling vs. Value-Based Pricing	-3.36	2.43	-20.48	<b>.000</b>
Bundling vs. Control	2.66	4.10	9.59	<b>.000</b>
Value-Based Pricing vs. Control	6.01	4.52	19.69	<b>.000</b>

A multivariate analysis of covariance (MANCOVA) utilizing simple contrasts was employed to explore the significant dimensions in predicting purchase intentions (Table 17). The price utility condition (discount on RRP) accounted for most canonical variance ( $\text{Eta}^2 = .52$ ), indicating that purchase intentions were significantly related to the utility of the deal presented: an expected result.

Demographics and personality were largely non-significant; however, there were moderate effects for social class ( $F(5,241) = 4.29, p < .002, \text{Eta}^2 = .057$ ) and neuroticism ( $F(5,241) = 2.453, p < .05, \text{Eta}^2 = .058$ ). Regarding processing methodologies, NFC ( $F(5,241) = 2.27, p < .05$ ) and FII ( $F(5,241) = 2.28, p < .05$ ) were significant predictors of intentions; however, financial literacy was insignificant, and consumer experience marginally insignificant. As no significant interaction effects were observed during testing, these were removed from the analysis.

The between-practice effects yielded little additional insight into the overall influence of demographics and personality. NFC was found to be significant for intentions across all promotional methods and can thus be confirmed as an essential trait in purchase decisions, even outside real retail environments. Unsurprisingly, its effect was most significant for drip-priced products ( $\text{Eta}^2 = .063$ ). FII was significant for both drip-priced ( $F = 3.55, p < .05$ ) and non-promoted products ( $F = 3.05, p < .05$ ): which was, to some degree, expected, given the calculative complexity of the former and the lack of evaluation needed in the latter.

**Table 17.**  
MANCOVA effects for the canonical variables for promotional purchase intentions as a function of processing method and price utility

Effect	Pillai's Trace	F	Sig.	Partial Eta <sup>2</sup>
Intercept	.161	7.616	.000	.161
Price Utility	.524	14.208	.000	.524
Age	.037	1.544	.178	.037
Education	.018	.722	.608	.018
Gender	.008	.310	.907	.008
Income	.04	1.672	.143	.04
Social Class	.057	2.392	.039	.057
Consumer Experience	.048	1.991	.08	.048
Extraversion	.029	1.187	.317	.029
Agreeableness	.036	1.507	.3189	.036
Neuroticism	.058	2.453	.035	.058
Conscientiousness	.014	.573	.720	.014
Openness to Experience	.012	.478	.793	.012
NFC	.093	4.09	.001	.093
FII	.241	12.606	.000	.241
Financial Literacy	.028	1.152	.334	.028

The Bonferroni corrected contrasts indicated differences in promotional purchase intentions as a function of price utility. Significant differences were found between the maximum and

depreciated utility conditions for BOGDIF ( $k = 10.05, p < .001$ ), value-based ( $k = 9.11, p < .001$ ), and non-promoted items ( $k = 5.60, p < .001$ ). Purchase intentions were found to be significantly greater than zero, despite fallible, more expensive, prices. This was the expected intention if participants realised the promotional price was cheaper. The non-significant differences between depreciated and maximum utility conditions for drip-priced ( $k = .455, p < .09$ ) and bundled items ( $k = .613, p < .78$ ) (Table 18) thus suggested these practices to invoke indifferent, and hence biased, purchase intentions. In sum, the promotional practices affected the utilitarian choices and increased intentions to a level above that of the control.

**Table 18.**

Bonferroni corrected simple contrasts (k) between promotional purchase intentions as a function of price utility

Simple Contrasts ( $k$ ) <sup>a</sup>		BOGDIF	Drip Pricing	Bundling	Value-Based Pricing	Control (No Promotion)
Maximum Utility vs. Depreciated Utility	Difference (Estimated – Hypothesised)	10.050	.455	.613	9.110	5.595
	Sig.	<b>.000</b>	.091	.078	<b>.000</b>	<b>.000</b>
Maximum Utility vs. Normal Utility	Difference (Estimated – Hypothesised)	4.335	4.000	3.590	3.730	3.268
	Sig.	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

a. Reference category = Maximum Utility, Pillai's Trace =  $F(10,236) = 12.663, p < .001$

With significant between-practice effects observed, a series of between-practice MANOVAs were conducted: to explore the dimensions significant in promoting either 'utilitarian' or 'fallible / biased' purchase intentions (Table 19). Corroborating previous findings, demographics and personality were largely non-significant. However, age ( $F(1,245) = 2.437, p < .05, \text{Eta}^2 = .2296$ ), social class ( $F(1,245) = 16.347, p < .001, \text{Eta}^2 = .621$ ), and neuroticism ( $F(1,245) = 4.013, p < .001, \text{Eta}^2 = .286$ ) in the depreciated pricing condition were exceptions, with the between-practice parameter estimates suggesting the effect to be negative across all three promotions (see Appendix 8).

NFC was significant in predicting purchase intentions in the depreciated pricing condition ( $F(1,245) = 2.647, p < .03, \text{Eta}^2 = .214$ ), whereas FII was significant for the maximum utility condition ( $F(1,245) = 5.086, p < .001, \text{Eta}^2 = .337$ ). The between-promotional effects revealed both relationships to be positive across all promotions, indicating that intuition was a positive predictor of

decision utility, whereas NFC was biased ones. Financial literacy was found to have no significant effect; however, consumer experience positively predicted purchase intentions in both maximum ( $F(1,245)= 3.922, p < .001, \text{Eta}^2 = .282$ ) and depreciated ( $F(1,245)= 2.568, p < .04, \text{Eta}^2 = .208$ ) pricing conditions.

Interaction effects were also observed, with experience and FII positively predicting utilitarian intentions, as predicted ( $F(1,245)= 3.719, p < .001, \text{Eta}^2 = .271$ ). Interestingly, despite experience and literacy were found to predict biased purchase intentions ( $F(1,245)= 2.154, p < .05, \text{Eta}^2 = .219$ ), an inspection of the between-practice effects revealed this relationship to be negative. It could therefore be suggested that when inexperienced and illiterate, the likelihood of biased purchase intentions increases. There was scant evidence of any dimensions significantly predicting intentions in normal priced conditions.

**Table 19.**

Summary of MANOVA effects with promotional purchase intentions as a function of the price utility conditions.

	<i>Maximum Utility</i>			<i>Normal Utility</i>			<i>Depreciative Utility</i>		
	<i>F</i>	<i>Sig.</i>	<i>Partial Eta<sup>2</sup></i>	<i>F</i>	<i>Sig.</i>	<i>Partial Eta<sup>2</sup></i>	<i>F</i>	<i>Sig.</i>	<i>Partial Eta<sup>2</sup></i>
Intercept	1.14	.35	.102	0.219	.95	.020	1.946	.10	.166
Age	2.437	.05	.196	0.947	.46	.081	0.751	.59	.071
Education	0.516	.76	.049	0.426	.83	.038	1.389	.25	.124
Gender	0.625	.68	.059	3.488	.01	.244	0.416	.84	.041
Income	0.829	.54	.077	0.711	.62	.062	1.329	.27	.119
Social Class	16.374	.000	.621	1.484	.21	.121	1.139	.35	.104
Extraversion	0.665	.65	.062	1.533	.20	.124	0.813	.55	.077
Agreeableness	0.737	.60	.069	0.698	.63	.061	1.357	.26	.122
Neuroticism	4.013	.000	.286	1.329	.27	.110	2	.10	.170
Conscientiousness	0.896	.49	.082	1.971	.10	.154	1.095	.38	.100
Openness to Experience	1.035	.41	.094	1.249	.30	.104	2.166	.05	.181
NFC	1.853	.10	.245	1.784	.13	.142	2.674	.03	.214
FII	5.086	.000	.337	1.511	.20	.123	1.671	.16	.146
Financial Literacy (FL)	1.039	.41	.094	1.592	.18	.128	0.792	.56	.075
Consumer Experience (CE)	3.922	.000	.282	0.517	.76	.046	2.568	.04	.208
CE*FII	3.719	.001	.271	1.04	.40	.088	1.735	.14	.150
FL*CE	1.436	.23	.126	2.169	.05	.167	2.154	.05	.219
NFC*FL	0.505	.77	.048	1.369	.25	.113	1.259	.30	.114

## 3.6 Discussion

### 3.6.1 Evaluation of results

The purpose of this investigation was to ascertain the effects of dual-process models on promotional purchase intentions and to determine the factors influencing a preference for NFC or FII purchasing behaviour. Although it was hypothesised that demographic and personality traits would be factors of importance, their significance was inconsistent, although social class and neuroticism were partial exceptions to this. The results provided some support to previous findings, with those from lower social classes typically displaying lower levels of financial literacy (Agarwal and Mazumder, 2013; Lusardi, 2008). Previous literature has suggested that this may hinder the achievement of utilitarian decision outcomes (Suri *et al.*, 2013).

More consistent with the literature was the effect of neuroticism, which biased decisions due to over-evaluation and the subsequent cognitive load during complex decision-making (Furnham and Thorne, 2013). Despite good financial literacy, the presence of neuroticism reduces the likelihood of intuitive thinking, in a possibly irrational attempt to mitigate decision error (Baumann and Kuhl, 2002). Notwithstanding this potential link, no correlation was found between neuroticism, NFC, or FII. While there was merit in including personality traits, in previous consumer research on demographics and personality the findings have been inconsistent and the effects have been attributed to small sample sizes or small power coefficients (Lysonski and Durvasula, 2013). Given this investigation's small cohort, the validity of these weak findings will need more rigorous testing.

The dual-process model, which included both NFC and FII, was found to predict purchase intentions. More specifically, NFC was particularly influential for biased intentions, whereas FII was more important for utilitarian decisions. This supports previous research that has found that intuition improves decision efficacy (Dijksterhuis *et al.*, 2006; Gigerenzer, 2007; Gigerenzer and Gaissmaier, 2011). However, previous findings have disregarded the optimal processing equilibrium between cognitive capacity and decision accuracy. This is important, as generally it has been suggested that excessive cognition can be detrimental, possibly leading to cognitive load (Malhorta, 1982; Townsend and Kahn, 2013). Similarly, intuition is only beneficial to decision-making when there is increased consumer experience and good financial literacy (Li, Baldassi, Johnson and Weber, 2013), a relationship supported by significant interaction effects.

Consumer experience, a result of perceived skill from previously successful decisions (Moxley *et al.*, 2012), has been attributed to increases in FII (Rerup, 2005). Experience has been shown to promote accurate price and product knowledge, through which intuitive decisions become more effective (Glaser and Walther, 2013; Kempf *et al.*, 2013). Moreover, prior research has identified that continuous positive, rewarding experiences reinforce the accuracy and use of intuition, leading to a reliance on intuitive reasoning across decision contexts (Moxley *et al.*, 2012). This was supported: a positive interaction between FII and experience was found to increase ‘utilitarian’ purchase intentions, with experience alone significantly predicting both satisfactory (utilitarian) and biased purchase intentions. This strengthens the theory that consumer experience leads to intuitive, accurate decisions (Rerup, 2005), although there was no evidence to support the previously validated effect of financial literacy.

Despite the fact that previous research has identified financial literacy as a vital component in the maximization of decision utility, in this study it had no influence on purchase intentions (Agarwal and Mazumder, 2013; Fox *et al.*, 2005; Howells, 2005). One explanation for this may be the use of self-reported measures, in which participants may have over-estimated their abilities. Given this possibility, additional research is required to assess the real impact of financial literacy on utilitarian decision-making. Nonetheless, a significant interaction between literacy and consumer experience was seen, supporting the previous finding that consumer experience promotes contextually specific financial literacy for, say, cookie prices (Lusardi, 2008). Such an interaction can be considered a consumer empowerment method (Williams, 2007), supported by the interaction increasing utilitarian purchase intentions. No significant interaction effects between FII and NFC were observed, despite financial literacy having sometimes been found to increase confidence in decision-making ability and intuition (Braunstein and Welch, 2002; Danes and Haberman, 2007; Remund, 2010). Further work is therefore needed to ascertain the extent to which literacy moderated ‘utilitarian’ decision-making with intuitive or cognitive modes of information processing.

Promotional practices, the contextual dimension of interest for this chapter, were found to consistently moderate purchase intentions across price utility conditions. However, significant differences between practices were also evident, especially in relation to the control. BOGDIF elicited the greatest purchase intentions, irrespective of price utility while drip pricing had the least effect. This corroborates the literature and substantiates the concept that BOGDIF is a premium promotional



practice which provides more VFM (Ahmetoglu *et al.*, 2014; Darke and Chun, 2005). Drip pricing, by contrast, is an elaborate, anchor-driven promotion which causes prices to shift upward over time and is accepted mainly for convenience (Robbert and Roth, 2014). While BOGDIF purchase intentions were highest for fallibly priced items, bundling intentions were high and did not vary across the pricing conditions. Bundling, therefore, created the most bias, given that purchase intentions were as high as for fallibly priced items. The promotional-based implications were assumed to be mostly definition-dependent, with bias reflected either as magnitudes of purchase intention, or indifference to pricing utility.

Before the study, drip pricing was predicted to be the practice that would create the most bias. Indeed, it had the lowest associated purchase intentions and significant indifference, both of which hint at possible bias. The basis for the predicted prominence of drip-pricing effects stems from previous studies suggesting that the complexity of and failure to adjust to dripped prices may increase purchase intentions, despite prices being higher than the market RRP (Gabaix and Laibson, 2006). Furthermore, as with value-based pricing, the difficulties inherent in ascertaining and quantifying subjectively priced product attributes, such as administration fees, will moderate susceptibility to bias (Chernev and Wheeler, 2003; Kopalle and Lindsey-Mullikin, 2003; Trifts and Häubl, 2003; Wolk and Spann, 2008). However, these theories require further validation.

From a theoretical perspective, promotional effects are interesting. According to prospect theory, losses from ‘discounting’ promotions should be perceived as larger than potential gains (Ariely, Huber and Wertenbroch, 2005; Kahneman and Tversky, 1979). Therefore, BOGDIF rewards should be less appealing than mitigating losses from, say, drip pricing. However, overall intentions indicated that BOGDIF was preferred. This may be because the desire for the ‘free’ product had a higher value perception than any discount (Lamb *et al.*, 2009; Pickton and Broderick, 2005; Shimp, 2010). In this study, evidence for this comes from the fact that although BOGDIF invoked biased purchase intentions, the differences were comparatively small. One conclusion that can be drawn from this observation is that while consumers had a sub-conscious realization of the fallible pricing effect, which led to an attempt to mitigate any potential losses, in reality no actions resulted. Such effects have been noted previously but not investigated further (Martin and Morich, 2011).

### 3.6.2 Methodological Limitations

Despite the confirmation of the hypotheses, this study had some methodological limitations. Specifically, the experimental design lacked ecological validity: it was online and had comparably fewer stimuli than real retail contexts. Even though participants were given explicit instructions about the nature of purchases, 'online' settings can alter behaviour (Degeertu *et al.*, 2000; Moe, 2003). Furthermore, the survey was framed in an 'in-store' scenario and participants were offered rewards for 'accurate' responses. Future studies should thus control for other influential decision moderators, such as budget (Davis, 1976; Heath and Soll, 1996) and product types and origins (Cai, Cude and Swagler, 2004; Elliott and Cameron, 1994). Moreover, the items featured in the different promotions could have been more analogous, allowing for a more direct comparison between promotional intentions. However, in retail contexts the same item would not be promoted in multiple ways, leading to a conundrum when deciding between an ecological and a methodologically sound design.

### 3.6.3 Implications and Applications

Despite these limitations, the findings have significant implications for academia, marketing, and the general FMCG sector. At the most overarching level, the effect of neuroticism and social class in encouraging 'deal proneness' has been proven, corroborating the literature (Bawa and Shoemaker, 1987a, 1987b, 1989). Such proneness has been linked to biased choices (Dewberry *et al.*, 2013). These findings were further supported in the depreciated condition. This can help provide marketers with a basic blueprint with which to market products. For example, promoting financially complex products, such as cumulative interest rate loans, to emotionally stable consumers from lower social classes may prove fruitful.

The influence of cognitive processing styles on promotion-based decisions was also supported (Lichtenstein *et al.*, 1997). This finding is particularly important as it directly supports the first cognitive component in the cogno-affective theory of Laroche *et al.*, (2003) and the first stage in the proposed model of decision evaluation (Einhorn and Hogarth, 1981). Both these theories propose that the method of information processing plays the first crucial role in evaluating, understanding and engaging with purchase information. In this study, the method of information processing had a direct effect on the decision outcome. Intuition is associated with more 'utilitarian' decisions (Dijksterhuis *et al.*, 2006; Gigerenzer and Gaissmaier, 2011; Hutton and Klein, 1999), while cognition increases the occurrence of 'biased' ones (Malhotram, 1982; Townsend and Kahn, 2013). The interaction with

financial literacy, although not noted previously, not only expands the current research but opens up avenues for further study in the area. From a retailing and marketing perspective, it hints at the potential benefits of increasing a consumer's cognitive load through tactful, goal-oriented advertising, which bombards the senses with product benefits. Through this, cognitive load may occur based on a multitude of benefits, overpowering hitherto unacceptable drawbacks such as lengthy subscription fees, inflated prices or surcharges.

However, the most important findings were the differences seen between promotional practices. While the literature has pointed to variation between methods, no research to date has cross-compared them in a decision context. The findings from this study advance the promotional research by highlighting the biasing effect of drip and value-based pricing, which is supported by hypothetical, underlying decision theories (Ahmetoglu *et al.*, 2014). Thus, this study opens avenues for organizations to better understand the contexts in which to market and promote their products. Moreover, insight into the processing methods predominately employed by targeted consumers could prove useful in developing long-term marketing strategies. For instance, the identification of intuitive consumers could allow retailers to develop unique in-store value associations that reinforce their price positioning. Future research could improve these findings via a greater variety of sample sizes, product types, and store type controls.

### **3.6.4 Conclusion**

In conclusion, the roles of NFC and FII were found to be significant in predicting promotional decision utility. FII increased utilitarian purchase intentions, while NFC increased the likelihood of biased purchase intentions. Financial literacy was identified as playing a significant role in decision utility when combined with experience, as consumer experience positively interacted with FII to encourage utilitarian choice. Although the influence of demographics in predicting FII and NFC was inconsistent, previous research suggests this is likely to be due to the small sample size. When promotions were considered, BOGDIF was found to produce the greatest purchase intentions. This was probably the result of providing unequivocal, easily discernible, value to consumers. Drip pricing, along with bundling, resulted in indifferent purchase intentions between utilitarian price conditions. Therefore, these two promotional methods could be considered to be the most bias-invoking practices. Despite the promising findings, the results could be considered definition-dependent and require further testing. In addition, it would be interesting to explore how the results

represent real purchasing behaviour by conducting further research in more applied contexts. Overall, the study findings provide an excellent introduction into how a consumer's psychology can influence promotional decision utility. Additionally, promotion-specific practices were also observed for the first time in the field. In supporting the first part of the cognitive component proposed by cognitive-affective theory, the findings offer a good foundation to explore another cognitive dimension in **Chapter 4**.

# CHAPTER 4 – IRPS AND PROMOTIONS ON DECISION UTILITY

## 4.1 Chapter Overview

According to Laroche *et al*'s., (2003) cogno-affective theory, the evaluation of key product information (e.g. price or quality) forms the second cognitive part of promotional decision making. In a similar vein, the decision evaluation triad proposed by Einhorn and Hogarth (1981) suggests that the processing of the central decision attribute (e.g. price) is the second phase of evaluating a decision option. In promotional contexts the most fundamental attribute is unarguably the advertised price, which defines the value for money proposition that promotions reward. However, to obtain the value for money the consumer must first evaluate a price's fairness. Such an evaluation requires consumers to process the price via one of the information processing methods (see **Chapter 3**). After processing the price it is evaluated against memory-based internalised prices (IRPs) that are derived from previous experience. If the advertised price is equivocal to others on the market and is deemed to meet the expectations of the consumer then the price is considered 'fair'. In a promotional context a fair price is one that offers the consumer with value for money compared to the typical regular retail price (RRP).

As was shown in **Chapter 3**, consumers can improve the utility of their promotional decisions via a combination of faith in intuition (FII), experience and financial literacy. The notion that intuitive decision making can enhance price fairness evaluations is also supported in the literature. For example, King and Hicks's (2009) research suggests that those who are intuitive should be less prone to bias as they are less likely to consciously attend to environmental stimuli. In the pricing literature it has thus been argued that making intuitive purchases decreases the likelihood of fallible prices that are, say, overpriced a to be internalised (Lichtenstein, Burton and Netemeyer, 1997). However, the positive effects of intuition on decision utility largely hinge on the consumer's experience purchasing promotions. Experience provides consumers with the tools and knowledge of how to correctly internalise and compartmentalise regular, expensive and discounted prices. For instance, experienced consumers can quickly internalise both the price and context (e.g. cheap price but discounted), whereas inexperienced consumers can internalise prices but often fail to do so with fluency or the contextual cue (Garbarino and Slonim, 2003).

In support of King and Hicks's (2009) research, those who pay too much attention to prices were described in other works as being susceptible to internalising, fallible, promoted prices (Kan, Lichtenstein, Grant and Janiszewski, 2013). Cognitively interacting with promotions, to the point of eliciting cognitive load, led some consumers to internalise the discounted price as 'fair' or representative of the RRP (Alford, and Biswas, 2002). Should this perceivably 'fair' price be used as a benchmark in future price evaluations the decision process could be considered as biased. Moreover, should a promoted price be internalised as representative of the RRP then theory of IRP malleability is further supported. In fact, a few promotional studies even confirming that lengthy promotions significantly enhance the likelihood of IRP malleability. For instance, research suggests that for many promotional methods returning to the RRP after a lengthy promotion is perceived as a price increase (Sinha and Smith, 2000). Given these findings, it stands to reason that the more malleable a person's IRPs, the more likely they are to be subject to bias.

No studies have yet considered IRP malleability in the context of promotions and decision utility. Also, no research has considered how information-processing methods moderate this possible relationship despite there being a clear link between cognitive reasoning and IRP formation. In this vein, the predominant aim of this chapter is to assess the extent to which internal reference prices are malleable as a function of price promotions. This potential malleability is indicative of a decision bias that can influence a plethora of purchase related perceptions and decisions. Moreover, the literature suggests that processing styles can influence the way consumers interact with, and likely internalise, prices.

The malleability of IRPs in the context of the 'big four' are tested across two studies. The first study aims at establishing the basic malleability of IRPs across promotional methods. This tests the extent to which prices can be manipulated given the exposure of 'fake', more expensively, priced promotions. The second study attempts to reconfirm the effects found in the first while also considering the influence of NFC, FII, financial literacy and consumer experience on decision utility. Together, these factors helped predict perceived price 'fairness' in conjunction with IRP malleability. While some papers suggest that monetary promotions are more susceptible to IRP change after just brief exposure, non-monetary promotions only affect IRPs after consistent lengthy exposure (Kalwani and Yim, 1992; Sinha and Smith, 2000). As such it would be expected that drip and value-based pricing should show the most significant effect while bundling and BOGDIF the least. The second

paper hypothesises that NFC and FII significantly predict the malleability of IRP and Consequentially, purchase intentionality. FII is predicted to decrease the malleability of IRP while NFC increases it.

## 4.2 General Introduction

Price evaluations involve the comparison of advertised prices with those previously experienced to ascertain a price's fairness. Such evaluations are pivotal in consumer decision making in that they help to promote purchase utility (Alba *et al.*, 1994; Gupta, 1988). One theory attempting to understand how consumers evaluate prices is that of reference pricing (Crompton, 2015). Reference price theory suggests that previously experienced prices can be internalised, recalled and subsequently used as benchmarks in assessing if an advertised price is representative of the market (Monroe, 1990; Monroe, 2003; Thomas and Menon, 2005). These internalised prices have been aptly named internal reference prices (IRPs). Although reference pricing research is well established when considering IRP formation and utilisation, it has yet to explore reference price malleability fully, i.e., the extent to which these prices can be, falsely or otherwise, manipulated.

As almost all cognitive research streams would suggest (Srinivasan and Ganth, 2017), mnemonic-based representations are open to manipulation from several dimensions (Kornell and Bjork, 2009). For instance, eyewitness testimony research consistently finds that the emotional involvement and distinctiveness of an event can moderate the accurate recall of that event (Wells and Olson, 2003). In consumer contexts, the consumer's processing style, financial literacy and purchase experience have been noted to be similarly influential in IRP formation and, later, price recall (Mazumdar, Raj, and Sinha, 2005). The degree to which consumers cognitively engage with a price and its contexts encourages accurate internalisation while experience and financial literacy helps to reinforce an IRP's accuracy relative to the context and RRP.

Environment based decision moderators such as pricing framing effects have also been considered influential in manipulating IRPs. For instance, the promotional literature has indicated that because promotions are becoming increasingly salient to consumers these prices are often internalised and attributed to products without their promotional context (Helgeson and Beatty, 1985). Returning to the regular retail price has, therefore, been perceived as a price increase that significantly impacted the way consumers make utilitarian decisions (Kalyanaram and Winer, 1995; Raghubir,

Inman and Grande, 2004). Such effects are likely further influenced by the specific promotional practice although this needs rigorous testing. Despite a strong link between price promotions and the way consumers make decisions, no research to the author's knowledge has considered promotion-specific effects in IRP contexts. This chapter aims to uncover how simple price framing techniques can have detrimental impacts on the utility of promotional decisions.

### **4.3 Literature Review**

One theory in pricing research is that price evaluations are a direct comparison between external and internal prices. External prices, being those advertised in the environment, contrast with internal prices, memory-based perceptions of prices. The latter, commonly referred to as 'internal reference prices' (IRPs) (Adaval and Monroe, 2002; Kalyanaram and Winer, 1995; Monroe, 2003; Thomas and Menon, 2005) are viewed as analogous price benchmarks used to assess the fairness of the external, advertised, price (Mazumdar, Raj and Sinha, 2005). While the literature on IRPs is well established, there exists a debate between the validity of the two IRP theories. Specifically, those supporting the traditional research tend to adopt a prototype price representation model, while those in support of the newer research support exemplar models. Work investigating each theory has debated the accuracy and consistency of IRPs, with exemplar theorists suggesting that prototype models leave IRPs particularly open to manipulation (Estelami and Lehmann, 2001).

#### **4.3.1 The Fundamental Theories in the IRP Literature**

Prototype price theory is among the most cited in the IRP literature. The theory is based on adaptation-level theory, which suggests that price judgments are deviations from a comparison standard (Helson, 1964). Put simply; the standard is the mean price derived from a range of similar prices in that product category (Monroe, 1990). Consequently, such theorists posit that a single value is extracted from a range of similar purchases, which acts as a price benchmark in later price evaluations (Kinard, Capella, and Bonner, 2013; Laroche, Kalamas, and Renard, 2015). Given the reliance on a single summary price, research suggests if consumers incorrectly average the price, say by using one that is discounted, future decisions may be biased.

The exemplar theory suggests that IRPs are the result of experiencing prices across a range of experiences (DelVecchio and Craig, 2008; Niedrich, Sharma, and Wedell, 2001; Niedrich, Weathers, Hill, and Bell, 2009). The model conceptualises reference prices as a range of potentially acceptable



prices based on previous experience (e.g., Janiszewski and Lichtenstein, 1999). For example, an IRP for a loaf of bread may range from 50p to £2 depending on what the consumer had previously paid. Consequently, rather than the IRP being a single summary price of a common member of a product category, one misrepresented price is likely less efficacious in decision outcomes. Because of this strength, exemplar theory outperforms prototype theory regarding promoting more accurate price evaluations (DelVecchio and Craig, 2008). Recent research indeed supports exemplar theory by confirming that consumers store, retrieve, and use a rich array of price information in generating price judgments (Niedrich, Sharma, and Wedell, 2001).

### **4.3.2 Literature on IRP Formation**

Despite the literature making advances in understanding IRP formation through these two theories, critics of IRP research propagate that measures of IRP are incomprehensive recall tests plagued by bad mental recall abilities (Chandrashekar and Grewal, 2006; Folkes and Wheat, 1995; Turley and Cabaniss, 1995). For instance, some research suggests that recalled prices deviated between 5% and 30% from the price stimuli experimentally presented (Helgeson, James and Sharon Beatty, 1987). Thus, it has been suggested that because price recall varies contextually and individually, ascertaining valid IRP effects has been viewed as impractical. Despite such criticisms, subsequent review work established a 5% threshold, stating that recall within this range could be considered accurate and thus representative of potential IRP effects (Estelami and De Maeyer, 2004; Estelami and Lehmann, 2001).

Building upon the early literature, researchers have subsequently worked on understanding IRP formation and utilisation through holistically representative models (Mazumdar, Raj, and Sinha, 2005; Thaler, 2008). Figure 9, an example of such work (Mazumdar *et al.*, 2005), highlights the plethora of environmental and psychological dimensions relevant to the formation of IRPs. Among these, consumer characteristics, past purchase experience, purchasing habits and promotions are noted as influential. Research on these topics has found each to be associated with varying degrees of consumer decision bias. For instance, high price sensitivity has been shown to increase promotional seeking and redemption at the cost of purchase utility (Garretson and Burton, 2003). Moreover, the promotional literature suggests that when high price sensitivity is coupled with inexperience, consumers are even more prone to promotional ploys, perceiving impractical deals as preferable (Erdem, Keane and Sun, 2008; Mittal, 1994). Each of these models of IRP formation seems to highlight the factors influencing IRP malleability equally.

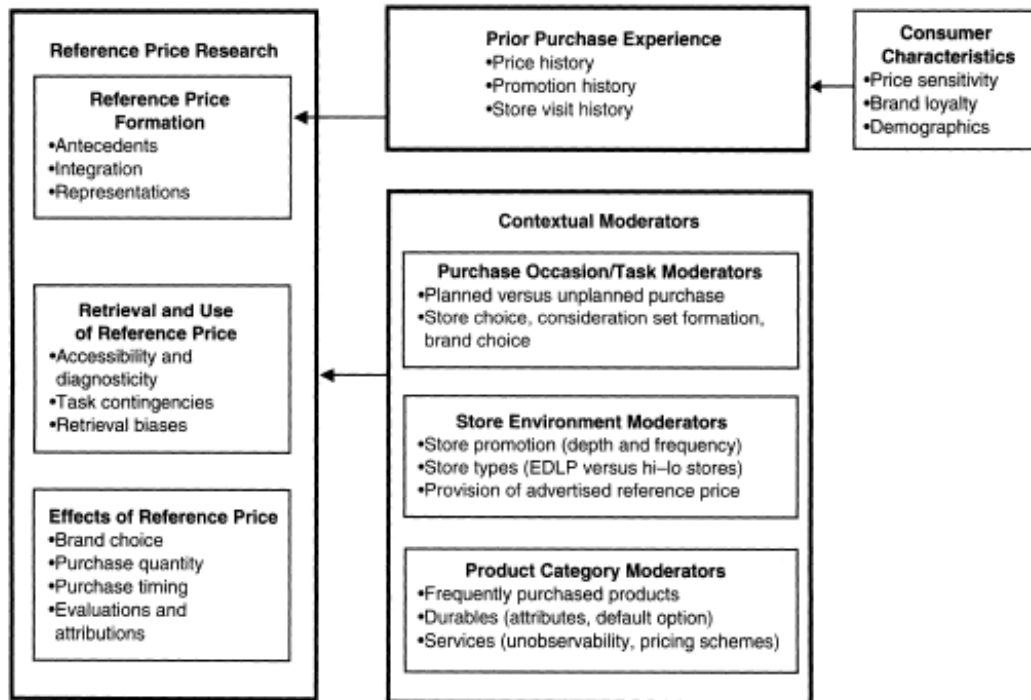


Figure 9. An illustrative review of the dimensions associated with reference prices (Mazumdar, Raj, and Sinha, 2005)

#### 4.3.4 IRP Malleability

IRP malleability describes the degree to which IRPs are fluid and open to manipulation as opposed to static and consistent (Kalwani and Yim, 1992; Lowe and Alpert, 2010; Sinha and Smith, 2000).

Among the most straightforward explanations of its occurrence are temporal constraints that are suggested to inhibit the accurate internalisation of both price and context (Estelami and Lehmann, 2001). An inaccurate internalisation of both together can severely skew price perceptions when, say, prices that are discounted are internalised as being regular. In fast moving consumer goods (FMCG) contexts, where the average time decision time per product is estimated as 20 seconds (Stahlberg and Maila, 2012), this effect is indicated to be more prevalent. Consequently, the literature suggests that when faced with the RRP, participants retrieved the misrepresented, discounted price, which leads to the RRP being perceived as expensive.

‘Sticker shock’ refers to the perceptual gap between internalised prices and those encountered in the retail environment (Winer, 1986). Specifically, if a discounted price is internalised as regular then the shock of the gap between it and the RRP is likely to be significant. Research finds a negative correlation between shock size and willingness to pay for the item. This lends credence to the theory

that IRPs can significantly impact purchase decisions (Winer, 1986). Despite not having been applied to the IRP literature, large sticker shocks pose concerns to IRP malleability and decision utility. For instance, price sensitivity has been associated with the likelihood of seeking and accepting promotions for the sake of the discount (Lichtenstein, Ridgway and Netemeyer, 1993). Consequently, consumers have been found to neglect the factors that are inherently important to them, say quality, on the misconception that the RRP is invalid. Such promotion seeking behaviours have been factored into the personality-type dimension named deal proneness.

As in Mazumdar *et al.*'s (2005) model, where consumer demographics significantly influence IRP formation, the cited deal prone demographic has been indicated as prone to IRP malleability (Steenkamp and Maydeu-Olivares, 2015). In support of this notion, research has consistently suggested that accurate price internalisation is a function of consciously attending to prices, their contexts and sources (Alba *et al.*, 1999; Kalwani and Yim, 1992; Neslin, 2002; Lalwani and Monroe, 2005). Deal-prone consumers are thus thought to be selective and conscientious in their promotional decisions, which may thus make them likely candidates for IRP malleability in promotional contexts.

#### **4.3.5 Promotions and Processing Methods with IRP Malleability**

In the literature, measures of intuitive or cognitive processing are commonly represented by faith in intuition (FII) and need for cognition (NFC), respectively. Similar to other information processing theories, an over-reliance on any one method can negatively impact the accuracy of decisions (Agarwal and Mazumder, 2013; Fox, Bartholomae, and Lee, 2005; Suri, Monroe, and Koc, 2013). For instance, while cognitive-based processing (NFC) may help to compartmentalise price, context and product together correctly so too can it lead to cognitive load. In retail environments, where cognitive load is a common occurrence, it stands to reason that prices may be internalised without context. This may be the case especially for deal-prone consumers who actively engage in trying to maximise price utility through overly complicated cognitive price evaluations (Lichtenstein, Netemeyr, Burton, 1990; Schneider and Currim, 1991). It could therefore be argued that IRPs are less likely to be manipulated if intuitive but slightly cognitive decisions are made. This is supported by research finding intuitive but considered decisions to be more utilitarian than highly cognitive-based alternatives (Dijksterhuis *et al.*, 2006; Gigerenzer and Gaissmaier, 2011; Hutton and Klein, 1999).

To maximise utilitarian outcomes and representative IRP formation, scholars suggest consumer experience and financial literacy to have empowering effects. Literary findings suggest experienced and financially literate consumers can congruently compartmentalise price and context with lesser cognitive effort (Clark and d'Ambrosio, 2008; Fox, Bartholomae, and Lee 2005; Howells, 2005). Specifically, high literacy allows for fluent price processing, thus freeing cognitive resources to internalise price and context correctly. Furthermore, Mazumdar *et al.*, (2005) suggest experience to aid the internalisation process by helping to curate new ways of compartmentalising complex prices. In situations where consumers are endowed with these abilities it would seem logical that, in combination with intuitive-based processing and lower deal proneness, IRP malleability may be significantly mitigated. However, as no research seems to have directly considered a relationship between IRP malleability, processing methods and deal prone traits, their combined effect on utilitarian promotional decision-making is speculative.

Concerning promotions, little research to date has specifically considered how price framing methods directly impact IRP malleability (Biswas and Sherrell, 1993, p. 44; d'Astous and Landreville, 2003, p. 1747). Diamond and Campbell (1989) were among the first to suggest that the type of promotional practice (i.e., monetary vs non-monetary) was a significant mediator in IRP malleability, i.e., the degree to which IRPs can be manipulated. More specifically, 'money off' promotions, which are measurable in the same units as the presented price, were found to have a more significant effect. In explanation of these findings, Nagle and Hogan (2006, p. 266) suggest that existing products and their prices are the primary reference point for future product purchase decisions. Thus, if consumers have a lower reference price than that advertised, the purchase will be framed as a loss.

Although the extent of malleability differs within the research, it is generally accepted that promotions have a negative influence on previously internalised prices. Sinha and Smith (2000) for instance suggest that multiple promotions, as opposed to one-off promotions, are particularly effectual in changing reference prices (Kalwani and Yim, 1992; Sinha and Smith, 2000). However, these findings are thought to hinge on the market maturity of a product, those more mature being promoted more frequently, it could be suggested that IRPs for market mature products are particularly prone to manipulation. In contrast, Lowe and Alpert (2010) examined how an introductory promotional method (either below the average or above it) affected value perceptions for new items. They showed

that IRPs evolved because of introductory promotional strategies, given that consumers had little experience with the presented product. Because of this, Lowe and Alpert (2010) suggested that for new products consumers assimilate the prices of similar products to create an average 'fair' price. In so doing, they are prone to include promoted prices from both internal and external sources, biasing their IRP and thus judgement.

In sum, the research on IRPs in promotional contexts highlights a contrasting picture. While on the one hand mature products are more frequently promoted, consumers are also more likely to have developed strong, stable IRPs for these products. In contrast, new products, for which no IRP would have been established, are less promoted but more susceptible to internalisation of false prices. Important in considering this contrast is the consistent finding that longitudinally IRPs need constant updating (Lowengart, 2002). As such, unless a product is salient daily the literature suggests that even for mature products IRPs are updated. If Lowe and Alpert's (2010) findings are valid, then the 'fair' prices created may well be influenced by a higher degree of promotional exposure for mature products.

Based on the previous literature presented some predictions can be made regarding the effects of specific promotional practices on IRP malleability. For instance, since drip pricing consists of multiple prices, thereby increasing the number of stimuli consumers need to process, evaluate and internalise, a proneness to internalising a discounted price is likely. For example, Ryanair's 99p flight prices are consistently internalised, despite consumers knowing these are not representative of the full price. Nevertheless, lower prices are expected as a result. In bundling scenarios, consumers engage in a similar evaluation process, needing to split the bundle into its individual components before the evaluation of price fairness is undertaken. However, unlike in drip pricing contexts where consumers are generally thought to engage with each dripped price cognitively, in bundling scenarios consumers are found to accept the price with little afterthought. Since these findings reflect highly intuitive decisions with little consideration, consumers are often found to accept bundles that offer little utilitarian value (Soman and Gourville, 2001). It, therefore, stands to reason that consumers may internalise the bundled price almost instinctively due to the highly intuitive decision-making process.

Regarding 'free' based promotions; the literature has already noted that monetary promotions are more effective in influencing IRPs (Diamond and Campbell 1989). It could therefore be

hypothesised that unless 'BOGOF' promoted products are presented to consumers in this form frequently they are unlikely to manipulate IRPs (Soman and Gourville, 2001). However, research on 'BOGDIF' promotions, where the 'free' item is different or complimentary, has found that the different item is often considered as a gift (Raghubir, 2004a). Because of this, the recalled price of the promotion has been found in some cases to be attributed to the 'free' item too, thus reflecting a biased IRP which is used to describe the whole deal rather than just one item. Finally, despite value-based promotions requiring only one price comparison, the obtained utility is highly dependent on having an IRP that is representative of the market. Specifically, the RRP that used to signal that the extent of the discount is often unrepresentative itself due to being inflated by the retailer to account for the price reduction (Biswas, Wilson, and Licata, 1993). Because the monetary value is clear and salient for these types of promotions consumers may, as in bundling scenarios, intuitively internalise the discounted price as representative of the RRP. No research has directly validated this notion, however.

#### **4.3.6 Overall Aims and Hypotheses**

In sum, each promotional practice has the potential to influence the internalisation of prices. However, very little work has directly considered how promotions like the 'big four' promote IRP malleability or how these IRPs are later sources of potential bias for promotional decisions. This research gap is further broadened in that the research has not considered consumer demographics, personality, shopping experience or the methods of price processing in these contexts. By attending to this lack of literature, a significant understanding of both IRP formation and how it influences decision utility may be acquired. Should the effect of promotion-based price framing be significant in manipulating IRPs and leading consumers to make biased decisions, fair pricing practices should be further encouraged.

To address the literary gap, the following two investigations aim to explore reference price malleability across promotional methods. Because consumers typically infer savings from promotions they are found to use less cognitive effort when evaluating prices (Ahmetoglu *et al.*, 2010; Silvera and Monroe, 2012; Smith, 2015; Xia and Monroe, 2009). Contrastingly, those who are deal prone typically overuse cognition in ascertaining a promotion's 'value for money'. Based on these assumptions it is hypothesised that if consumers either process promotions with too little or too much consideration the promoted price is likely to be internalised without its context. Moreover, since

literacy and experience have improved decision utility in other contexts (Lambert, Bessièrè and N'Goala, 2012; Moxley, Ericsson, Charness, and Krampe, 2012), similar effects could be observed in promotional settings. After a review of the topics covered in the IRP literature, no research seems to have considered the effect of IRP malleability on decision utility in a promotional context. As such these studies will be the first to consider how and if malleable, inaccurate, price benchmarks may promote purchase intentions for mispriced promotions.

## **4.4 Study One**

### **4.4.1 Study One Aims and Hypotheses**

This investigation aims to establish the extent to which promotional practices increase the likelihood of internalising unrepresentative prices after minimal price exposure. Controlling for contextual conditions including brand innovation, maturity and purchase conditions, it is predicted that participants will be consistent in their price evaluations. As such, it is hypothesised that those who experience no longitudinal changes to advertised promoted prices will deviate no more than 5% from their original price estimates ( $H_1$ ). Contrastingly, those exposed to manipulated prices are predicted to be significantly more likely to internalise them, exposure time being a moderating factor of any effect ( $H_2$ ). From a price promotion perspective, it is expected that drip pricing and bundling will show the most significant change between price judgements, with BOGDIF and value-based pricing following suit ( $H_3$ ). Consequently, this study aims to assess price evaluation consistently in light of promotions, considering the implications for the efficacy of subsequent decision making.

## **4.5 Method**

### **4.5.1 Participants**

Employees from six organisations and a random consumer sample provided a cohort of 288 participants. 68 were later removed due to non-completion of the mandatory longitudinal phases. The remaining 220 participant cohort consisted of employees ( $n=178$ ), consumers ( $n=24$ ), and students ( $n=18$ ). Working adults were recruited via their organisations and invited to partake via email. The student and consumer sample were recruited via an online participant database. No specific inclusion criteria were used although all participants were UK based. Demographically, the sample was indicated as gender balanced (male, 48%; female, 52%), mid-aged ( $M=41.6$ ,  $SD=13.7$ ) and of middle social class ( $M=4$ ,  $SD=1.4$ ), with a moderate degree of purchase experience ( $M=25.12$ ,  $SD=8.1$ ). Personality indices indicated a sample to be highly agreeable ( $M=5.81$ ,  $SD=2.8$ ), conscientious

( $M=5.99$ ,  $SD=2.78$ ), and open to experiences ( $M=6.06$ ,  $SD=2.74$ ). Also showing signs of high extraversion ( $M=5.99$ ,  $SD=2.94$ ) and moderate neuroticism ( $M=3.39$ ,  $SD=1.72$ ) it would seem the sample was both socially open and cautious. The small student cohort originated from higher education institutions in the UK, while the consumer sample was randomly surveyed after non-related pharmaceutical purchases. Employees originating from organisations came from the professional service sector, but those involved with pricing in their organisations were asked to abstain. Contact with all parties was facilitated via email, subsequently allowing the digital survey to be distributed as such.

#### **4.5.1 Design/Materials**

Using a longitudinal between-subjects design, participants were randomly allocated to the control ( $n=60$ ) or exposure ( $n=180$ ) condition. All participants answered two multifaceted questionnaires that were presented in conjunction with a two-page promotional flyer designed to increase price exposure but decrease IRPs.

The promotional flyer (see Appendix 9 for example), presented to participants in the exposure condition, consisted of a mixture of news items and promotional callouts. Promotional ‘callouts’ were designed to present the manipulated prices for each promotion. Prices were a 10% reduction of the mean price evaluations for both the overall promotion and its constituent items indicated at the start of the investigation. A two-minute exposure limit was set following the average browsing time of 10 seconds per advertisement (Stahlberg and Maila, 2012). Brand names were removed from all referenced material, the colour scheme of the flyer being red, green and yellow to enable differentiation from any other UK grocery retailer.

Products chosen for experimentation were derived from real promotions at the time of this study. Categorised as moderately salient, no single product alone was likely to be encountered daily. Promotions were market averages, promotional messages being the UK market standard of red and white. Table 20. indicates the constituent products of each promotional practice in combination with their real RRP.



**Table 20.**  
Used strategies and associated experimental products with regular retail prices (RRP)

Strategy	Products	RRP (Mean £)
BOGDIF	Luxury Knife Price (Large)	29
	Luxury Knife Price (Medium)	
Drip Pricing	Sim/Carrier Price	39.5
	Phone Price	
	Headphones Price	
	Data Usage Price	
Value-Based Pricing	Charges Price	89.99
	Lexmark Printer Price	
	Paper Price	
Bundling	Ink Price	3.4
	Sandwich Price	
	Snack Price	
	Drink Price	

Demographics measured were taken from similar pricing studies, consisting of gender, age and social class. Social class levels ( $n=7$ ) represent the documented socio-economic structure within the UK (Butler and Savage, 2013). These items were used in conjunction with a four-item consumer experience scale, attributed a reliability of  $\alpha = 0.85$ , which was adopted from Wallace, Giese and Johnson (2004) (see Appendix 6). Combining the scale with three additional questions – ‘when it comes to purchasing, how do you rate your experience at... knowing your products, knowing their real price, and knowing where to find them?’ – broadened the scope of the measure. The overall measure was attributed a significant internal reliability of  $\alpha=.78$ . Personality was measured using a brief measure of the ‘big five’ known as the ten-item personality index (TIPI - Gosling, Rentfrow and Swann, 2003). Although somewhat inferior to larger personality instrument, the measure is considered useful in designs with complex and lengthy measurements (Muck, Hell and Gosling, 2007). Since there are only two questions that measure broad domains e.g. extraversion reporting alphas is thought to be misleading (Kline, 2000; Wood and Hampson, 2005). Taken together, these variables allow for the emergence of a potentially important consumer typology in influencing the extent of IRP malleability.

#### 4.5.3 Procedure

Each participant was invited to partake in a study in which they could win a monetary sum, given accurate and complete participation. Participants indicated their demographic, personality and experiential predispositions before being presented with the promotional offers. Participants subsequently indicated their internal reference prices for each of the promotion’s sub-components as

well as for the deal. In the case of drip pricing and bundling, IRPs were provided for total prices, not elements such as VAT. Following a two-minute delay, allowing for processing time, an eight-item numerical filler task ended the first phase. The second phase, involving either the presence or absence of the exposed prices, began with an email reminder, which was sent one week after phase one completion. Participants were given a 24-hour window to access the online flyer, during which they had four minutes to study and attend to the new prices. The time spent studying the flyer was recorded. The third and final stage, utilising all participants, was conducted two weeks later. This final stage mimicked the first, in which participants made price evaluations of each item and the offer.

#### 4.6 Results

IRP malleability was calculated as the percentage change between original and post-exposure price judgements using SPSS 13. These were compared to those in the non-exposure condition, which acted as the control. Price judgements across the two-time points seemed to differ across exposure conditions, both at a product and promotion level (Table 21). At a product level, the mean change between the pre- and post-exposure price judgements increased for more expensive items, e.g. 'Printer Price' ( $M=-15.5$ ,  $SD=20.77$ ). For smaller, more familiar items, e.g. 'Drink Price' ( $M=-.52$ ,  $SD=.46$ ), findings were less consistent. Drip pricing seemed to have the most significant difference between price judgements in both the exposure ( $M=-9.87$ ,  $SD=.976$ ) and control conditions ( $M=3.96$ ,  $SD=.056$ ). Although smaller in the latter, it can be inferred that across strategies, drip and bundling pricing represented the most extensive and smallest changes, respectively. However, despite changes in control condition the changes in price judgments were small and within the 5% threshold.

Pairwise t-tests were used to assess the significance of the difference between price judgments after manipulated price exposure, or not. Significant differences were observed for most products and promotional practices between the two conditions (Table 22). The two products not subject to significant judgment changes were from the bundling condition, namely 'sandwich' ( $t(1,219) = .81$ ,  $p < .10$ ) and 'drink' prices ( $t(1,219) = .99$ ,  $p < .10$ ). However, the significant difference between 'snack prices' ( $t(1,219) = 1.64$ ,  $p < .05$ ) may have influenced bundling as a strategy being significantly different from the control.

**Table 21.**

Descriptive statistics for IRP change (original price judgements vs new price judgements (%)).

	<i>Control</i>		<i>Exposure</i>	
	Mean	Std. Deviation	Mean	Std. Deviation
Luxury Knife Price (Large)	-3.63	1.345	-7.9	2.434
Luxury Knife Price (Medium)	-4.520	1.666	-9	2.689
Sim/Carrier Price	3.760	.997	-7.2	1.348
Original Phone Price	4.400	.889	-10.4	1.979
Original Headphones Price	3.040	.335	-5.1	1.566
Original Data Usage Price	-3.510	.222	-6.3	1.755
Original Charges Price	-2.250	.235	76.1	5.805
Original Printer Price	3.960	.555	-15.5	2.007
Original Paper Price	2.580	.674	-14.5	5.145
Original Ink Price	-4.690	.833	-7.8	3.222
Original Sandwich Price	4.350	.553	-5.2	.019
Original Snack Price	3.660	.448	-5.025	.7259
Original Drink Price	4.260	.339	-5.518	.4586
BOGDIF	2.230	.228	-4.806	.516
Drip Pricing	3.960	.556	-9.87	.975
Value Pricing	-1.650	.887	-4.065	1.414
Bundling	2.300	.669	-3.915	.494

**Table 22.**

Pairwise t-tests between control price evaluations and those after reference exposure for both individual items, strategies and between strategies.

Pairwise Comparison	t	Sig. (2-tailed)
Control Luxury Knife Price (Large) - Exposed Luxury Knife Price (Large)	12.86	.001
Control Luxury Knife Price (Medium) - Exposed Luxury Knife Price (Medium)	12.06	.001
Control Sim/Carrier Price - Exposed Sim/Carrier Price	57.32	.001
Control Phone Price - Exposed Phone Price	55.80	.001
Control Headphones Price - Exposed Headphones Price	39.85	.001
Control Data Usage Price - Exposed Data Usage Price	12.26	.001
Control Charges Price - Exposed Charges Price	10.13	.001
Control Printer Price - Exposed Printer Price	7.52	.001
Control Paper Price - Exposed Paper Price	25.60	.001
Control Ink Price - Exposed Ink Price	7.37	.001
Control Sandwich Price - Exposed Sandwich Price	0.81	.089
Control Snack Price - Exposed Snack Price	1.64	.050
Control Drink Price - Exposed Drink Price	0.99	.096
BOGDIF (Control) - BOGDIF (Exposed)	101.72	.001
Drip Pricing (Control) - Drip Pricing (Exposed)	103.56	.001
Value Pricing (Control) - Value Pricing (Exposed)	12.34	.001
Bundle Pricing (Control) - Bundle Pricing (Exposed)	74.97	.001

Given that the exposure to manipulated prices seemed to yield IRP malleability, the exposure condition was explicitly focused upon. Using t-tests, significant mean differences between pre- and post-exposure price judgements were observed for all practices (Table 23), namely BOGDIF ( $t(1,219) = -137.96, p < .001$ ), Drip ( $t(1,219) = 150.01, p < .001$ ), Value-Based ( $t(1,219) = 107.395, p < .001$ ) and Bundling ( $t(1,219) = 2.621, p < .05$ ) priced items. Moreover, significant differences between IRPs for all constituent products, although in some cases small, further indicated the spread of the effect. For instance, while changes for 'mobile data charges' ( $t(1,219) = 32.186, p < .001$ ) were large, 'printer' ( $t(1,219) = 72.167, p < .001$ ) and 'printer paper' ( $t(1,219) = 42.526, p < .001$ ) changes were smaller.

The decrease in price evaluations, at both an item and practice level, indicated that IRPs were successfully, negatively, manipulated as a function of price exposure. Interestingly, while the clear majority of prices changed in line with the direction of the manipulation, that for 'mobile carrier charges' increased considerably (76.1%). Running counter to many of the findings, this result may highlight the possibility of an exterior, unaccounted for effect, e.g. the exposure to prices in the real retail environment, something requiring consideration.

Considering promotional practices, the most significant change was attributed to drip pricing, and the least to bundling pricing. While percentage change for value-based pricing was -4.06%, this represented the most substantial overall decrease of £46.95. Having taken a percentage change approach, the importance of drip pricing is indicated. Further supported by the differences between strategic options, the biggest differences in changes were attributed to drip and bundling ( $t(1,219) = 178.867, p < .001$ ) and drip and value-based pricing ( $t(1,219) = 169.343, p < .001$ ). These represented a significant 86% and 81% difference respectively. Change between other strategic options, for instance, that between value-based and bundling ( $t(1,219) = 39.037, p < .001$ ), represented a smaller but equally valid effect (6.02%). The influence of each strategy in promoting IRP malleability was supported.

**Table 23.**

Pairwise *t*-tests between original price valuations and those after reference priming for both individual items, strategies and between strategies.

Pairwise Comparison	t	Sig. (2-tailed)	Mean Price Diff (£)	Percentage Change
Original Luxury Knife Price (Large) - New Luxury Knife Price (Large)	56.74	<b>.001</b>	1.50	-7.9 <sup>a</sup>
Original Luxury Knife Price (Medium) - New Luxury Knife Price (Medium)	111.09	<b>.001</b>	1.50	-9 <sup>a</sup>
Original Sim/Carrier Price - New Sim/Carrier Price	10.81	<b>.021</b>	0.30	-11.2 <sup>a</sup>
Original Phone Price - New Phone Price	78.62	<b>.001</b>	40.30	-10.4 <sup>a</sup>
Original Headphones Price - New Headphones Price	29.95	<b>.001</b>	0.75	-5.1 <sup>a</sup>
Original Data Usage Price - New Data Usage Price	32.19	<b>.001</b>	0.60	-6.3 <sup>a</sup>
Original Charges Price - New Charges Price	-455.112	<b>.001</b>	-2.10	76.1 <sup>a</sup>
Original Printer Price - New Printer Price	72.17	<b>.001</b>	144.50	-15.5 <sup>a</sup>
Original Case Price - New Case Price	42.53	<b>.001</b>	3.50	-14.5 <sup>a</sup>
Original Mouse Price - New Mouse Price	2.313	<b>.038</b>	1.30	-7.8 <sup>a</sup>
Original Sandwich Price - New Sandwich Price	.244	.120	0.01	-2.12 <sup>a</sup>
Original Snack Price - New Snack Price	51.63	<b>.001</b>	0.10	-10.03 <sup>a</sup>
Original Drink Price - New Drink Price	.820	.094	0.01	-.518 <sup>a</sup>
BOGDIF (Original) - BOGDIF (New)	137.96	<b>.001</b>	1.50	-7.81 <sup>a</sup>
Drip Pricing (Original) - Drip Pricing (New)	150.01	<b>.001</b>	4.10	-9.87 <sup>a</sup>
Value Pricing (Original) - Value Pricing (New)	107.40	<b>.001</b>	48.60	-7.07 <sup>a</sup>
Bundling (Original) - Bundling (New)	2.621	<b>.05</b>	0.15	-6.96 <sup>a</sup>
BOGDIF - Drip Pricing	-153.16	<b>.001</b>	-	68.9 <sup>b</sup>
BOGDIF - Value-Based Pricing	104.66	<b>.001</b>	-	14.48 <sup>b</sup>
BOGDIF - Bundling	143.51	<b>.001</b>	-	20.45 <sup>b</sup>
Drip Pricing - Value-Based Pricing	169.34	<b>.001</b>	-	81.35 <sup>b</sup>
Drip Pricing - Bundling	178.87	<b>.001</b>	-	86.31 <sup>b</sup>
Value Pricing - Bundling	39.04	<b>.001</b>	-	6.02 <sup>b</sup>

<sup>a</sup> Percentage change between original and new valuation mean price valuations

<sup>b</sup> Percentage change between strategy types based on mean percentage differences

Considering promotional practices, the most significant change was attributed to drip pricing, and the least to value-based pricing. While percentage change for value-based pricing was -3.9%, this represented the most substantial overall decrease of £46.95. Having taken a percentage change approach, the importance of drip pricing is indicated. Further supported by the differences between strategic options, the biggest differences in changes were attributed to drip and bundling ( $t(1,219) = 178.86, p < .001$ ) and drip and value-based pricing ( $t(1,219) = 169.343, p < .001$ ). These represented a

significant 86% and 81% difference respectively. Change between other strategic options, for instance, that between value-based and bundling ( $t(1,219) = 39.037, p < .001$ ), represented a smaller but equally valid effect (6.02%). The influence of each strategy in promoting IRP malleability was supported.

Four linear regressions were used to determine the extent to which each dimension was influential in IRP change for each promotional practice. Each Given the found differences, the IRP malleability of each promotional practice was modelled (Table 24). At an inter-item level, four influential demographics were indicated as significant in predicting promotion-based IRP malleability. These were age, consumer experience, agreeableness and neuroticism. More specifically, while age had a positive relationship with drip pricing IRP malleability ( $B = .384, t = 6.62, p < .001$ ), consumer rating ( $B = -.443, t = -6.845, p < .001$ ) had a negative relationship. These relationships were found across practices. While gender was non-significant throughout, socioeconomic status was negatively influential to drip pricing ( $B = -.172, t = 2.52, p < .012$ ) and value-based pricing ( $B = -.174, t = 2.74, p < .01$ ). It would thus seem that older, poorer, less experienced consumers were more susceptible to IRP change when pricing strategies had been used. These effects were notably small.

Personality indices indicated agreeableness, e.g. with drip pricing ( $B = .395, t = 8.723, p < .001$ ), and neuroticism, e.g. with BOGDIF ( $B = .449, t = 9.574, p < .001$ ), to be particularly influential in promoting IRP malleability across promotional practices. Both traits were significantly positively associated with the strategies, thus suggesting that those emotionally stable and less agreeable are less prone to internalising false prices. Such findings sit well with the finding that those who engage with the promotion prices too much are more susceptible to such effects.

Finally, exposure time to the manipulated prices, was a significant factor in predicting changes to drip ( $B = .095, t = 2.124, p < .05$ ) and value-based ( $B = .106, t = 2.347, p < .02$ ) price judgements. As per the predictions, time spent exposed to manipulated prices seemed to increase price changes. Combined with the non-significance of previous reference prices, changes in price judgements seem to come down to a combination of dimensions. The resultant models accounted for over 55% in the case of drip, BOGDIF and value-based pricing, and 35% for bundling.

**Table 24.**

Linear regression results depicting the factors important to predicting IRP malleability for each of the 'big four' promotional practices.

	Drip Pricing			BOGDIF			Bundling			Value-Based Pricing		
	Std. B	t	Sig.	Std. B	t	Sig.	Std. B	t	Sig.	Std. B	t	Sig.
(Constant)		-17.66	<b>.000</b>		-19.384	<b>.000</b>		-5.755	<b>.000</b>		-6.599	<b>.000</b>
Gender	0.015	0.311	.756	-0.029	-0.561	.576	-0.023	-0.373	.710	-0.021	-0.425	.671
Age	0.384	6.62	<b>.000</b>	0.422	7.087	<b>.000</b>	0.365	5.134	<b>.000</b>	0.416	7.179	<b>.000</b>
Consumerism	-0.443	6.845	<b>.000</b>	-0.41	5.575	<b>.000</b>	-0.416	5.777	<b>.000</b>	-0.493	6.845	<b>.000</b>
Social Class	0.172	2.523	<b>.012</b>	0.062	1.066	.287	0.039	0.677	.499	0.174	2.74	<b>.007</b>
Extraversion	-0.029	-0.64	.523	-0.04	-0.862	.390	-0.003	-0.06	.952	-0.008	-0.166	.869
Agreeableness	-0.395	-8.723	<b>.000</b>	-0.388	-8.258	<b>.000</b>	-0.32	-5.769	<b>.000</b>	-0.383	-8.427	<b>.000</b>
Neuroticism	-0.481	-10.704	<b>.000</b>	-0.449	-9.574	<b>.000</b>	-0.359	-6.478	<b>.000</b>	-0.467	-10.271	<b>.000</b>
Conscientiousness	0.04	0.901	.369	0.051	1.089	.278	0.023	0.406	.685	0.066	1.434	.153
Openness to Experience	0.002	0.047	.963	-0.006	-0.126	.900	0.045	0.801	.424	0.001	0.003	.921
Time Spent Studying Flyer	0.095	2.124	<b>.035</b>	0.082	1.752	.081	0.028	0.507	.613	0.106	2.347	<b>.020</b>
Drip Pricing Pre-Exposure IRP (Sim-Carrier)	-0.108	-2.382	<b>.018</b>									
Drip Pricing Pre-Exposure IRP (Phone)	-0.084	-1.195	.234									
Drip Pricing Pre-Exposure IRP (Headphones)	0.062	1.366	.174									
Drip Pricing Pre-Exposure IRP (Data Usage)	0.031	0.674	.501									
Drip Pricing Pre-Exposure IRP (Charges)	0.029	0.628	.531									
BOGDIF Pre-Exposure IRP (L. Luxury Knife)				-0.086	-0.743	.459						
BOGDIF Pre-Exposure IRP (M. Luxury Knife)				0.148	1.301	.195						
Bundling Pre-Exposure IRP (Sandwich)							-0.008	-0.151	.880			
Bundling Pre-Exposure IRP (Snack)							0.036	0.635	.526			
Bundling Pre-Exposure IRP (Drink)							-0.024	-0.434	.665			
Value-Based Pre-Exposure IRP (Printer)										-0.136	-1.879	.062
Value-Based Pre-Exposure IRP (Paper)										-0.085	-1.866	.063
Value-Based Pre-Exposure IRP (Ink)										-0.012	-0.265	.791
		$R^2$	0.606		0.56			0.389			0.588	
		Adjusted $R^2$	0.577		0.555			0.351			0.562	
Model Statistics		$F$	20.96		21.96			10.1			22.66	
		Sig.	<b>.000</b>		<b>.000</b>			<b>.000</b>			<b>.000</b>	

## 4.7 Discussion

### 4.7a Evaluation of results

This investigation aimed to ascertain the malleability of internal reference prices as a function of promotional practices. This notion was primarily confirmed from the results which indicated that price judgements for products decreased in line with the experimental manipulation. Promotional practices further exacerbated this effect.

Confirming the first hypothesis, price judgements in the control condition deviated no more than 5% across longitudinal phases. As such, the 5% threshold for accurate recall (Estelami and De Maeyer, 2004; Estelami and Lehmann, 2001) was placated. This would suggest that participants were accurate and consistent in their recall and price evaluation abilities. However, because significant differences between controlled price judgements were observed, it could be argued that there was, nevertheless, a difference. Such small but significant differences between control, non-experimental judgements have been noted by several scholars across the IRP literature (Helgeson, James and Sharon Beatty, 1987). After consideration, such small discrepancies (under the 5% threshold) do not necessarily indicate poor recall ability or the fallibility of memory (Dickson and Sawyer, 1990; Krishna, Currim, and Shoemaker, 1991; Mazumdar, Raj, and Sinha, 2005; Vanhuele and Dreze, 2002). Instead, it is worth considering that between experimental phases participants were exposed to real prices for the products used, thus shifting and averaging their IRPs accordingly. Given the fluctuation between positive and negative changes in the control group, this is to some degree supported.

Considering the differences in price judgements at a product level, it seems indicative that price salience and purchase experience play a moderating role. While the moderating role of these factors is not conclusive, the non-significant change among bundled items and correlations between consumer experience and price change indicate this. More specifically, given the sample of working adults, it seems logical that exposure to the prices of those items, i.e. 'drinks and 'sandwiches', would be high and consistent. Participants may thus have strongly represented prices of such items. The purchase experience indices are an indication of this. Furthermore, as representativeness research has suggested the increased familiarity with these items and their prices promotes access to the attributed internalised schema (Chandrashekar, 2012; Grewal *et al.*, 1998; Vaidyanathan, 2000). By



promoting both responsiveness and accuracy, it is, therefore, possible that product evaluations become more simplistic.

Although the familiarity of products should equate to stable IRPs, unfamiliar items, e.g. the 'knife-set' did not necessarily show the most susceptibility to change. Being an item that would commonly have low exposure and limited likelihood of being purchased, these prices did not change as much as the more familiar 'Printers', for instance. What could therefore be suggested is that, in combination with IRPs, consumers might be able to internalise specific promotional attributes. Previous research indeed suggests that consumers internalise and anticipate discounts for items if promoted too frequently because they know how much the item has been promoted (Ahmetoglu *et al.*, 2010; Chandon, 1995; Silvera and Monroe, 2012). Since the results are partially inconclusive future work is needed to establish the extent of these effects.

Having established that IRPs are susceptible to change, the change seems to differ as a function of promotional strategy. With a particularly substantial effect of drip pricing being found, previous research indicating that the complexity of drip pricing can bias decisions is therefore supported (Huck, Schmid, and Wallace, 2013). Since drip pricing seemed more biasing than other pricing methods, the notion that consumers fail to adjust after having anchored on prices is supported. Whether the participants were anchored on the prices from the promotional flyer is not established although this seems likely given the decreases in price judgements. That said, the effect of other psychological dimensions is also conceivable since the other three methods rely more on the ability to associate prices with value.

Unexpectedly, BOGDIF invoked the second most significant change. While some scholars note that 'BOGDIF' promotions only influence IRPs after highly frequent promotions (Sina and Smith, 2005), others suggest that the free item causes an overall decrease in value. This is due to 'value' being commonly attributed to prices, in this case there being none (Kamins, Folkes, and Fedorikhin, 2009; Raghubir, Inman, and Grande, 2004). From a bundling perspective, it would seem that because bundles are perceived as cost-efficient (Kamins, Folkes and Fedorikhin, 2009), items decrease in worth over time. This could be similarly the case for value-based pricing, given that value in a retail context is often associated with the price (Grewal, Monroe, and Krishnan, 1998). Thus, it seems that pricing can influence the memory-based price attributions needed to assess product value.

While the pricing component was evidentially strong an interpersonal and environmental dimension was also strongly indicated.

From the findings, it seems clear that pricing practices can influence the memory-based price attributions needed to assess product value and price 'fairness'. However, pricing practices were not the only predictor of IPR malleability, with a psychographic typology of those susceptible to IRP malleability emerging. The typology indicated age, social class, agreeableness and neuroticism to be of note in predicting the ability to evaluate price fairness. Such a typology sits well with the literature as similar findings indicate agreeableness and neuroticism to increase the acceptance of comparatively lower prices (Lichtenstein *et al.*, 1993). However, the weak effect sizes noted by each of these traits in this study warrants considerable further testing.

Finally, regarding the experiential and environmental conditions, both consumer experience and product saliency were implicated as moderators of malleability. For instance, the negative relationship between consumerism and IRP malleability supports the former. The non-significant changes in price judgements among more salient bundled items suggest the latter. Given the sample of working adults, it seems logical that exposure to the prices of more salient items, e.g. 'drinks and 'sandwiches', would be high and consistent, and so less susceptible to the internalisation of false prices. Supporting the body of work that suggests that increased saliency of product attributes and prices can promote both responsiveness and accuracy of product price evaluations (Chandrashekar, 2012; Grewal *et al.*, 1998; Vaidyanathan, 2000), some effects on subsequent decision-making can be inferred.

## **4.8 Study Two**

### **4.8.1 Aims and Hypotheses**

The second study aims to build upon the findings in the first by additionally exploring the influence of information processing styles and financial literacy on IRP malleability. It also extends study one by exploring the degree to which IRP malleability directly impacts the utility of a promotionally based purchase decision. As per the literature, both NFC and FII are predicted to significantly predict IRP malleability, with intuition alone (FII) and high levels of cognition (NFC) increasing it ( $H_1$ ). The rationale for this pertains to the attention afforded to studying and considering manipulated prices. Those intuitive and too engaged with assessing a price's fairness are suggested to internalise the discounted price without its context (Clark and d'Ambrosio, 2008; Fox, Bartholomae, and Lee 2005). However, as with decision utility, FII in combination with financial literacy and experience is hypothesised to decrease IRP malleability ( $H_3$ ). The combination of these traits makes consumer's experienced enough to use intuition when appropriate, compartmentalising the price equally as efficiently. Together, these hypotheses will aim to establish a direct link between processing styles and IRP malleability which shall be used to explore potential effects on decision utility. Given that inaccurate reference prices can bias price fairness judgements (Mazumdar, Raj, and Sinha, 2005), it is hypothesised that inaccurate, unrealistic prices have the potential to elevate price acceptance and purchase intentions. Thus, IRP malleability is again hypothesised to promote the likelihood of biased decision outcomes ( $H_5$ ).

## **4.9 Method**

### **4.9.1 Participants**

Employees from four SMEs in conjunction with a random consumer sample provided a comprehensive sample of  $n=250$ . 24 of these were removed from the data analysis, given incomplete responses. The organisations contacted were not limited by any selection criteria. Sampled consumers were randomly selected and approached after recent but non-related purchases i.e., pharmaceutical products. The remaining 226 constituted a mixture of employees ( $n=131$ ) and consumers ( $n=95$ ) that were gender balanced (Males, 45% vs Females, 55%). Descriptive statistics suggested the sample to be mid-aged ( $M=35.9$ ,  $SD=10.64$ ), moderately educated ( $M=3.8$ ,  $SD=1.29$ ), and of a middle-upper social class ( $M=5.1$ ,  $SD=4.16$ ). Moreover, participants could be considered moderately conscientious ( $M=6.0$ ,  $SD=2.77$ ), agreeable ( $M=6.6$ ,  $SD=2.5$ ), and neurotic ( $M=5.7$ ,  $SD=2.37$ ), while also introverted ( $M=3.8$ ,  $SD=2.75$ ) and disagreeable ( $M=6.6$ ,  $SD=2.5$ ). Participants indicated strong preferences for

both cognition (NFC) ( $M=22.4$ ,  $SD= 4.88$ ) and intuition (FII) ( $M=26.1$ ,  $SD= 5.58$ ), whilst also indicating themselves as having strong financial literacy ( $M=6.3$ ,  $SD=1.73$ ).

#### **4.9.2 Design/Materials**

Using a longitudinal design, two multifaceted questionnaires like those in *study 1* were distributed among the participants. Using random allocation, the sample was split between control ( $n=111$ ) and exposure ( $n=115$ ) conditions. The first survey constituted of the same demographic, personality and consumer experience valuation questions, which was complemented by the addition of NFC and FII scales as well as measures of financial literacy. Need for cognition (NFC) and faith in intuition (FII) scales (see Appendix 4), utilising 10-point likert judgment measurements, had both previously been attributed reliabilities of  $\alpha=0.82$  (Norris, Pacini and Epstein, 1998). Given the potential problems of self-reported financial literacy, ten numerical, calculation-based literacy items, e.g., ‘What is 12 divided by £4.50?’, were employed as a measure of financial literacy (see Appendix 10 for a full list.).

In further contrast to the first study, a non-promotion control condition was used. Moreover, each practice was attributed to a more expensive, less familiar FMCG product to establish the extent to which IRP malleability could occur for more luxurious obscure products. To establish purchase decision utility as a function of IRP malleability, a three-item purchase intention scale was employed (Baker and Churchill, 1977). Attributed a consistently high average scale reliability ( $\alpha=.81$ ) (Stafford, Stafford, and Day, 2002), purchase intentions after exposure to manipulated prices would indicate the effect of IRP malleability on decision utility.

The longitudinal design in this investigation mimicked *study 1*, with participants in the exposure condition studying manipulated prices (+10% to RRP) for up to five minutes after the first week (see Appendix 9). A comparison between exposure and non-exposure purchase intentions would help highlight the extent to which decision utility was, as a function of IRP malleability, obtained. Table 25 indicates the associations between promotional strategies, items used and RRP. Item and pricing combinations were based upon realistic offers found across the top ten UK retailers.

**Table 25.**

Used strategies and associated experimental products with regular retail prices (RRP)

Strategy	Products	RRP (Mean £)
BOGDIF	Swiss Cutting Knife	£18
Drip Pricing	Nintendo Wii, with VAT + Surcharges	£49
Value-Based Pricing	Johnny Walker Gold Label	£45
Bundling	Printing bundle (printer, paper and ink)	£54, full cost
Control	White Sauvignon Blanc 700ml	£12

### 4.9.3 Procedure

Participants indicated their demographic, personality, and experiential predispositions, along with their levels of FII, NFC and financial literacy. Following this, participants were presented with a full list of the promotions and their constituent, non-promoted, items. IRPs for both were ascertained. In the case of drip pricing and bundling, IRPs were provided for total prices, not elements such as VAT. Following a two-minute delay (allowing for processing time), ten numerical calculations acted as a filler task. All participants were then presented with the real RRP of the promotion, after which they provided their purchase intentions for each. The cohort was then randomly allocated to the exposure condition, involving either the presence or absence of the promotional flyer in the week to come. One week after the completion of stage one, those in the exposure condition were given a 24-hour window to access the manipulated price flyer. Participants were again provided up to four minutes to study and attend to the new prices. A further week later all participants provided their IRPs again, after which they completed a twenty-item numerical filler task and watched a five-minute distractor video. Finally, manipulated prices were shown to all participants, for which they had to provide their final purchase intentions.

### 4.10 Results

IRP malleability was calculated as a percentage change between original and post-exposure price judgements using SPSS 13. These were compared to those in the non-exposure condition, which acted as a control. Additionally, the individualistic deviation of a participant's pre-exposure IRP judgement from the product's real RRPs was calculated to account for the extent of each internalised price's representativeness.

In ascertaining the presence of an IRP effect pairwise t-test were employed. Significant mean differences were found between total pre-exposure and post-exposure price judgements for all

practices except the control (Table 26). Upon inspection, drip pricing invoked the most significant price judgment change ( $M=7.0$ ,  $SD=2.68$ ). Value-based ( $M=6.3$ ,  $SD=2.01$ ) and bundling ( $M=6.29$ ,  $SD=2.33$ ) showed similarly high levels. However, these mean percentage changes do not account for the exposure condition or deviation from the RRP. Per the hypotheses, drip pricing exhibited the greatest significant change in price judgements. This supports the findings in *study 1*. Value-based and bundling exhibited a more significant change in comparison to BOGDIF, although the difference between these practices was non-significant. Thus, their effect on IRP malleability could be considered moderate but equal. All were greater than the control, supporting the hypothesis of promotions impacting IRP malleability as in *study 1*.

**Table 26.**  
Correlations and pairwise t-test comparisons between promotional strategies and their respective percentage change.

	M (av. % change)	SD	r	Sig.	Paired Comparisons	
					t	Sig. (2-tailed)
Drip Pricing IRP Original vs New	+6.99	2.68	.672	<b>.000</b>	14.15	<b>.000</b>
Value-Based IRP Original vs New	+6.30	2.01	.636	<b>.000</b>	10.13	<b>.000</b>
Bundling IRP Original vs New	+6.29	2.33	.611	<b>.000</b>	6.672	<b>.000</b>
BOGDIF IRP Original vs New	+4.32	1.02	.605	<b>.000</b>	2.948	<b>.004</b>
Control IRP Original vs New	+3.22	0.84	.270	<b>.000</b>	1.905	.058
Drip Pricing and Value-Based			.556	<b>.000</b>	11.965	<b>.000</b>
Value-Based and Bundling			.433	<b>.000</b>	.157	.875
Drip Pricing and Bundling			.478	<b>.000</b>	8.671	<b>.000</b>
Drip Pricing and BOGDIF			.136	.072	13.000	<b>.000</b>
Drip Pricing and Control			.063	.406	18.187	<b>.000</b>
Value-Based and BOGDIF			.150	<b>.046</b>	12.521	<b>.000</b>
Value-Based and Control			.043	.567	19.152	<b>.000</b>
Bundling and BOGDIF			.162	<b>.031</b>	10.985	<b>.000</b>
Bundling and Control			.049	.514	16.736	<b>.000</b>
BOGDIF and Control			.100	.184	11.639	<b>.000</b>

In testing for the factors that influence IRP malleability, a MANCOVA with Bonferroni corrected post-hoc comparisons were employed (see Table 27). Results suggested that extraversion significantly predicted IRP malleability ( $F(5,221) = 2.08$ ,  $p < .05$ ,  $Eta^2 = .064$ ), but even more so by consumer experience ( $F(5,221) = 5.07$ ,  $p < .001$ ,  $Eta^2 = .142$ ), NFC ( $F(5,221) = 31.81$ ,  $p < .001$ ,  $Eta^2 = .513$ ), and FII ( $F(5,221) = 16.54$ ,  $p < .001$ ,  $Eta^2 = .354$ ). Financial literacy had no significant effect ( $F(5,221) = 1.47$ ,  $p < .204$ ,  $Eta^2 = .046$ ), while the exposure to manipulated prices did ( $F(5,221) = 13.87$ ,  $p < .001$ ,  $Eta^2 = .315$ ). Interaction effects were also observed. Specifically, an interaction between NFC and FII increased IRP malleability ( $F(5,221) = 28.36$ ,  $p < .001$ ,  $Eta^2 = .48$ ), as was

experience with both FII ( $F(5,221) = 5.26, p < .001, \text{Eta}^2 = .148$ ) and NFC ( $F(5,221) = 3.71, p < .003, \text{Eta}^2 = .011$ ).

An inspection of between-promotion parameter estimates (see Appendix 10) confirmed that both NFC and FII increased IRP malleability across practices. Furthermore, the positive relationship between NFC and FII seemed to increase IRP malleability. However, as was suggested in the literature consumer experience, which was associated with increases in FII (Moxley *et al.*, 2012), subsequently decreasing malleability across practices. Interestingly, the positive relationship between experience and NFC was also suggested to increase malleability. From these findings it can be concluded that a significant malleability effect occurred - one that was determined by processing styles as hypothesised.

**Table 27.**  
MANCOVA depicting the influence of predictor variables on the canonical variable of IRP percentage change across promotions.

Effect	Pillai's Trace Value	F	Sig.	Partial Eta <sup>2</sup>
Intercept	0.562	38.777	<b>.000</b>	0.562
Gender	0.014	0.428	.828	0.014
Age	0.051	1.632	.155	0.051
Education Level	0.022	0.667	.649	0.022
Social Class	0.006	0.179	.970	0.006
Extraversion	0.064	2.081	<b>.05</b>	0.064
Agreeableness	0.028	0.876	.499	0.028
Neuroticism	0.045	1.427	.218	0.045
Conscientiousness	0.015	0.456	.808	0.015
Openness to Experience	0.046	1.456	.208	0.046
Consumerism	0.142	5.017	<b>.000</b>	0.142
NFC	0.513	31.808	<b>.000</b>	0.513
FII	0.354	16.541	<b>.000</b>	0.354
Financial Literacy	0.046	1.466	.204	0.046
FII*NFC	0.484	28.361	<b>.000</b>	0.484
Experience*FII	0.148	5.264	<b>.000</b>	0.148
Deviation of IRP from RRP	0.037	1.172	.325	0.037
Experience*NFC	0.11	3.719	<b>.003</b>	0.11
Experience*Financial Literacy	0.019	0.59	.707	0.019
Experience*Exposure	0.03	0.929	.464	0.03
Exposure Condition	0.315	13.866	<b>.000</b>	0.315

Post-hoc t-tests indicated the extent to which exposure to the biased prices influenced IRP malleability (*see* Table 28). There was a non-significant difference in BOGDIF price judgements for the non-exposure ( $M=4.24, SD=1.06$ ) and exposure ( $M=4.39, SD=0.99$ ) conditions;  $t(1,225) = -0.95, p < .35$ . The same was true for the control condition ( $t(1,225) = -1.17, p < .25$ ). Drip pricing, on the

other hand, differed significantly as a function of exposure ( $t(1,225) = -20.83, p < .001$ ), as did value-based pricing ( $t(1,225) = -19.18, p < .001$ ). Together, these suggest both a significant promotional and an exposure effect, given the fact of exposure increasing percentage change and change for promotions being higher than for the control.

**Table 28.**  
Independent samples t-test between price judgement changes for promotional practices as a function of the exposure condition.

				<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>			
		M	SD	F	Sig.	t	Sig.	M. Diff	
Drip Pricing (Wii)	No Exposure	4.56	0.73	EVA	68.37	.000	-20.83	.000	-4.52
	Exposure	9.09	1.85	EVnA			-21.99	.000	-4.52
Value-Based (JW Gold)	No Exposure	4.53	0.70	EVA	66.229	.000	-19.18	.000	-3.30
	Exposure	7.83	1.42	EVnA			-20.05	.000	-3.30
Bundling (Printer)	No Exposure	4.42	1.16	EVA	14.769	.000	-14.97	.000	-3.50
	Exposure	7.91	1.82	EVnA			-15.44	.000	-3.50
BOGDIF (Knife)	No Exposure	4.24	1.06	EVA	0.828	.36	-0.95	.34	-0.15
	Exposure	4.39	0.99	EVnA			-0.95	.34	-0.15
Control (Wine)	No Exposure	3.14	0.79	EVA	1.076	.30	-1.17	.24	-0.15
	Exposure	3.29	0.88	EVnA			-1.18	.24	-0.15

EVA = Equal variances assumed

EVnA = Equal variances not assumed

Turning to the utilitarian outcomes of decisions, a series of pairwise t-tests were conducted to test for a difference between purchase intentions pre- and post- price exposure (Table 29). Significant differences were observed between purchase intentions before and after RRP manipulation for all practices. No significant differences were found for the control ( $t(1,175) = -1.905, p < .058$ ). When considering intentions as a function of exposure (*see* Figure 10), differences were only significant for drip pricing ( $F(5,221) = 433.833, p < .001$ ), value-based pricing ( $F(5,221) = 367.707, p < .001$ ) and bundling ( $F(5,221) = 223.961, p < .001$ ). As is depicted, after exposure to manipulated prices purchase intentions increase, thus representing biased decision outcomes. No significant effects were found between intentions for BOGDIF and control pricing.



**Table 29.**

Correlations and pairwise t-tests between original and post-exposure purchase intentions.

	r	Sig.	M	t	Sig. (2-tailed)
Purchase Intention Drip Pricing (New) - Purchase Intention Drip Pricing (Original)	.672	.000	-4.69	-14.150	.000
Purchase Intention Value-Based Pricing (New) - Purchase Intention Value-Based Pricing (Original)	.636	.000	-3.59	-10.125	.000
Purchase Intention Bundling (New) - Purchase Intention Bundling (Original)	.611	.000	-2.36	-6.672	.000
Purchase Intention BOGDIF (New) - Purchase Intention BOGDIF (Original)	.605	.000	-1.00	-1.948	.05
Purchase Intention Control (New) - Purchase Intention Control (Original)	.270	.000	-.791	-1.905	.058

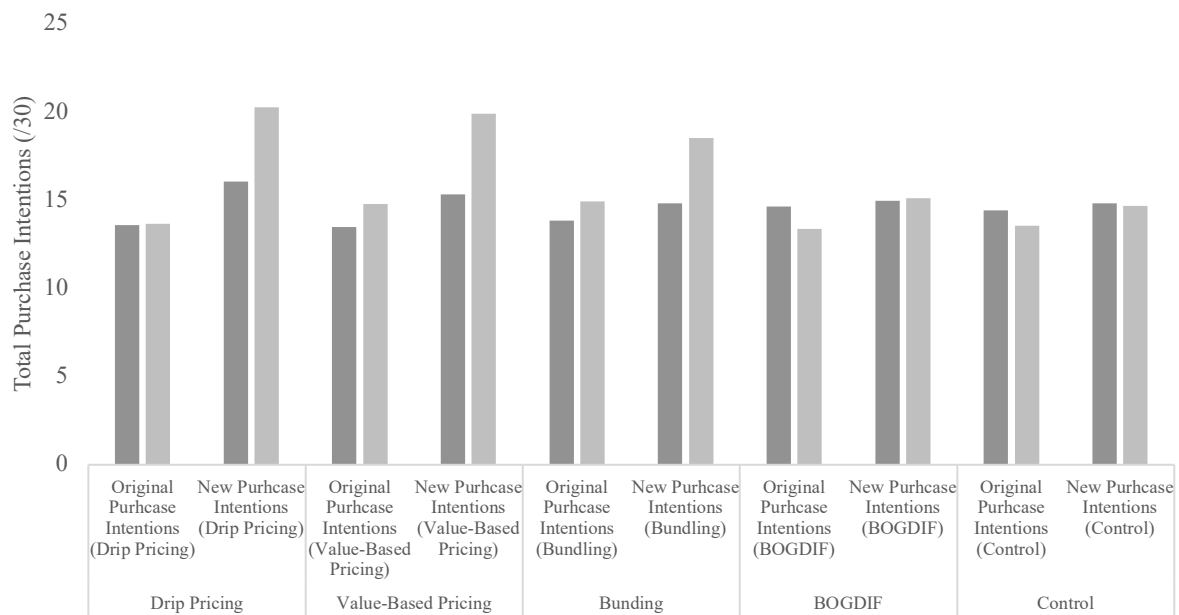


Figure 10. Purchase intentions as a function of promotional methods and exposure conditions: ■ No-Exposure, ■ Exposure

To investigate the factors influential in promoting biased, decisions, a series of composite utility variables were created. For each promotional practice, a linear composite score was created from the differences between pre- and post-exposure purchase intentions. Higher scores indicated more sub-optimal, biased, decisions. Linear regressions were then used to model decision utility across promotional practices (*see Appendix 11*)

NFC was found to be positively significant in predicting biased decisions for drip ( $B = 1.51, t = 2.673, p < .01$ ), value-based ( $B = 1.4, t = 2.250, p < .026$ ) and BOGDIF ( $B = 2.24, t = 2.67, p < .01$ ) practices. In support of **Chapter 3**, high FII was a negative predictor of sub-optimal, biased, purchase intentions for drip pricing ( $B = -1.547, t = -3.07, p < .003$ ), value-based pricing ( $B = -2.03, t = -2.38, p < .02$ ), and BOGDIF ( $B = -2.17, t = -2.56, p < .05$ ). Consequently, it could be concluded that higher NFC increased the likelihood of biased decision outcomes while FII utilitarian ones.

IRP malleability, while not predicting biased drip pricing purchase intentions, did so for bundling ( $B = -0.91, t = -3.88, p < .001$ ), BOGDIF ( $B = -0.67, t = -2.34, p < .025$ ) and value-based ( $B = -0.40, t = -1.91, p < .05$ ) practices. Thus, IRP malleability seemed to increase the likelihood of biased purchase intentions as predicted. Moreover, although the magnitude of price knowledge (i.e., the deviation of a participant's pre-exposure IRP judgement from the product's real RRP) did not interact with the actual effect of IRP malleability on decision utility, it was predicted to increase the likelihood of biased purchase intentions.

Financial literacy had a significant negative relationship with value-based pricing ( $B = -1.574, t = -2.859, p < .005$ ). Similar relationships were, although non-significant, indicated for other practices and as such indicative of literacy increasing utilitarian choice. This was further supported in that positive interaction between NFC and literacy negatively predicted biased, purchase intentions for all practices. Speaking of the empowering effects of experience and literacy, their positive interaction also decreased biased purchase intentions for drip ( $B = -1.476, t = -2.402, p < .02$ ) and value-based pricing ( $B = -1.556, t = -2.307, p < .01$ ). Personality and demographic related traits remained non-significant, all the final practice dependent regression models being found to be significant.

The variance explained for the control model was found to be the greatest; ( $F(25, 201) = 31.28, p < .001, R^2 = .838, R^2_{\text{Adjusted}} = .811$ ), and for the BOGDIF model the least; ( $F(25, 201) = 2.80, p < .001, R^2 = .317, R^2_{\text{Adjusted}} = .203$ ).

## 4.11 Discussion

### 4.11.1 Evaluation of results

This investigation aimed to ascertain a potential link between NFC, FII and IRP malleability. Moreover, it aimed to establish if, as per *study 1*, IRP malleability could be influenced by promotional practices and how the utility of decisions is directly affected as a result. In sum, the results once again showed that IRPs are subject to alteration given the exposure to manipulated prices. It was also shown that both NFC and FII increased IRP malleability. After a more in-depth exploration of these findings, it was found that experience interacted positively with faith in intuition to mitigate malleability. These results, therefore, show that the method by which consumers process and internalise prices can influence the price internalisation process. This is supported by ample work in the literature (e.g., Clark and d'Ambrosio, 2008; Fox, Bartholomae, and Lee 2005), which also suggests that experience acts as an empowerment tool to promote the accuracy of intuitive decision making (Lambert, Bessière, and N'Goala, 2012; Moxley, Ericsson, Charness, and Krampe, 2012; Williams, 2007). In the context of IRPs, experience helps the accurate compartmentalisation of the price information i.e., discount, context and product (Moxley *et al.*, 2012) which translate over to helping to make accurate price fairness evaluations.

Regarding promotional practices, drip pricing was supported as the most biasing invoking strategy. It increased both IRP malleability and biased purchase intentions after exposure to experimentally inflated prices. BOGDIF was found to be the least biasing strategy both in terms of its influence on IRP malleability and fostering biased purchase intentions. Value-based and bundling remained significantly influential in promoting malleability but were seemingly non-differentiable in their effect. These findings can be attributed to the generally complex and biasing effect of drip pricing (Morwitz, Greenleaf, Shalev and Johnson, 2009), with value-based pricing requiring a reasonable degree of financial literacy (Kinard, Capella, and Bonner, 2013; Laroche, Kalamas, and Renard, 2015) and bundling consistently encouraging perceptions of savings (Arora, 2008). BOGDIF, on the other hand, is often considered a highly rewarding practice, and a framing method that is less complicated to evaluate given that the value of one item equals that of the other. Since research has suggested that this practice only influences IRP over longer timeframes (Sinha and Smith, 2004), the lower effect of BOGDIF in this instance sits well with the literature.

Concerning decision utility, the previous research suggests that discounted prices are efficiently internalised and can bias price fairness evaluations (Mazumdar, Raj, and Sinha, 2005; Monroe, 1973). The results from this study showed that IRP malleability was a positive predictor of sub-optimal purchase intentions. Moreover, this effect was more profound in consumers who were less knowledgeable about real prices. In fact, those with who recalled IRPS deviated the greatest from the average and market representative RRP appeared to have higher IRP malleability and be more likely to express biased purchase intentions. One explanation for this may stem from previous work which suggests that if consumers are unfamiliar with a product and its price their IRP is less developed and likely taken from a variety of similar products. Because of this lack of familiarity, the consumer is far more likely to internalise the presented price and later use it as a key, perhaps even solitary benchmark for the price fairness assessment (Kinard, Capella and Bonner, 2013; Laroche, Kalamas and Renard, 2015). However, despite a link between IRP malleability and inaccurate price preconceptions, no significant interaction effect between the two was found to predict decision utility. Future research would do well to continue to establish the extent of these effects.

Finally, consumer experience is suggested as a prominent predictor of utilitarian choice in the literature (Lowe and Alpert, 2010; Lambert, Bessière, and N'Goala, 2012; Moxley, Ericsson, Charness, and Krampe, 2012). However, experience only predicted biased intentions through an interaction with financial literacy and intuition. As the literature suggests, consumer experience has been associated with increases in FII. This allows consumers to use experience to quickly and accurately determine price fairness (Hammond *et al.*, 1987; Lambert *et al.*, 2012; Schmitt and Zarantonello, 2013). Moreover, experience has been associated with financial literacy in that it increases the number of times consumers may evaluate prices for a particular product. The significant interaction of literacy and experience in mitigating the IRP malleability aligns and supports the literature suggesting that, together, both can empower decisions (Williams, 2007).

Similar in effect to consumer experience, no significant effect of literacy on IRP malleability or purchase intent was found. However, its significant interaction with intuition meets expectation, with research having suggested that, like experience, literacy acts as an empowerment tool. This allows consumers to minimise cognitive effort through intuitive decisions (Schmitt and Zarantonello, 2013). Further research will be needed to establish the extent of these effects, especially regarding how they translate universally into promotional practices.

## 4.12 General Discussion

Although it was predicted that promotional practices could significantly manipulate IRPs, the extent of effects surpassed expectation. In both studies, drip pricing was found to be the most bias invoking practice, with value-based pricing and bundling being of moderate effect compared to the control. Although the effect of a BOGDIF promotion was inconsistent, it is possible, as in all IRP research, that during the time lapse between price judgements participants were exposed to higher prices in the real environment. Taken together, the effect that these practices seem to have on IRPs seem to have significant consequences to the utility of decisions. As suggested in the literature, inaccurate price references can severely skew judgements of price fairness, thus leading to the acceptance of prices that are not economically sound (Krishna *et al.*, 2002; Lowe and Alpert, 2010; Nagle and Hogan, 2006; Slonim and Garbarino, 1999). These effects, highlighted in *study 1*, were particularly prevalent for drip pricing and bundling.

With both demographic and personality traits, influential in the difference of price judgements in *study 1* but not *2*, this inconsistency may be a function of the smaller sample sizes (Doob, Carlsmith, Freedman, Landauer and Soleng, 1969; Slonim and Garbarino, 1999). Moreover, understanding each factor in the context of consumer experience indicates the need to consider such traits. For instance, age has been associated with technology use and online price searches, in turn allowing for a repertoire of more realistic IRPs (Harris, Straker, and Pollock, 2013; Hernández, Jiménez, and José Martín; 2011). This technological element, indicated by the positive correlations between age and price changes across promotional items in *study 1*, may also explain the influence of consumer experience. For instance, technology can promote decision utility via a provision of easy switching to compare prices across several sales and marketing channels (Yang, Su and Fam, 2012). Given the negative relationship between consumer experience and IRP change in *study 1*, this notion seems plausible.

Demographics have previously been associated with personality (Chamorro-Premuzic and Furnham, 2003), a link between the two possibly explaining the seemingly important role of personality traits in IRP change. One such association has been previously found between social class and conscientiousness towards spending, lower classes naturally being more conscientious (Webley and Nyhus, 2013). Although the strong correlation between the two was found in *study 1* ( $r=.35$ ,  $p<.001$ ), conscientiousness positively influenced price change in this instance. While counter-

intuitive, this trait has been associated with the need for cognition, which when too high can bias choice (Homburg, Totzek and Krämer, 2014). Based on these findings a combination of these personality traits may, therefore, increase the likelihood of promotional-based IRP malleability. Further testing will be needed in this regard.

A hypothesis supported across the studies was the effect of minimal exposure to manipulated prices in manipulating price judgements. Given that exposure has been suggested as a primary component of IRP formation (Mazumdar, Raj, and Sinha, 2005), the variance explained by this component across these studies resonates with the literature. As has been indicated by other literature (Mazumdar *et al.*, 2005), exposure can increase familiarity and accessibility of recently experienced prices. This familiarity likely leads to the rehearsal, and internalisation of said price (Li, 2015). While being inconsistently significant amongst each specific practice, the non-significance may stem from the multiple calculations and adjustments made because of the promotional strategy. What could, therefore, be the case is that exposure is significant at influencing each price adjustment, but not overall. However, the marginal non-significance in this instance does not detract from its effect.

Processing styles, namely NFC and FII, were indicated as having a highly significant effect on IRP malleability and purchase utility. While both were positively correlated, refuting the misconception that the concepts are bipolar in nature (Petty, Briñol, Loersch, and McCaslin, 2009), some intuition seemed to be successful in promoting utilitarian decisions. Furthermore, literacy and consumer experience consistently interacted with processing methods to mitigate IRP malleability, therefore acting as methods of decision empowerment. Literacy for instance successfully interacted with FII in *study 2* thereby increasing the ability to make decisions more utilitarian. In *study 1* a similar effect is found between consumer experience and FII. The validity of such interaction lies in that the research has consistently suggested how greater experience allows consumers to use intuition with higher accuracy (Rerup, 2005). An in-depth consideration of these relationships in determining purchase utility is still needed.

With the hypotheses having been primarily supported, attention is drawn to the potentially limiting factors of both studies. The first, already noted limitation was the decision to determine IRP change as a function of percentage, rather than monetary, change. For instance, while percentage change is indeed indicative of change, it is a precursor to actual monetary change. As can be seen for

'mobile carrier data' in *study 1*, whereby a 76% price increase was indicated, in monetary terms this reflected only £2. In comparison, while changes in 'iPhone' IRPs were only represented by a -10.4% change, they represented a considerable £28.64 decrease. While it may be that percentage change allowed for an unbiased metric by which to measure the change in IRP, this consideration would change the findings.

From a methodological perspective, the prices used in the exposure condition were based upon the mean from sample responses and thus are not unique to everyone. Future work should manipulate the respondents' IRP and then assess the extent to which change occurs. That said, participants' judgements were like their original ones in any case. Something that could have thus also been established is the extent to which participants had previously experienced the products and their prices. This could have helped highlight the extent to which experience with these products played a role as opposed to consumer experience in general. If these factors were addressed with a larger, more diverse sample, the scope of the presented conclusions could have been extended.

Alongside improving the methodological design, future studies should ascertain the consistency of the indicated pricing effects and the differences that product types might promote. It may well be that different items do not pose the same effects, given the use of a specific strategic type, for instance. Furthermore, it would be useful to ascertain the difference between consumer segments, both in different market sectors and internationally, to assess the applicability of the sample. Combining these with developing an understanding of the exact mechanisms behind IRP and more sophisticated research methods such as fMRI scanners can help establish the extent to which IRP is memory based. More generally then, future work should not only validate the findings indicated here but develop our understanding of IRP in more common retail contexts. Given the indicative links between consumer behaviours and technology (Harris, Straker, and Pollock, 2013; Hernández, Jiménez, and José Martín; 2011) as well as societal stereotypes and practices of gender (Claiborne and Sirgy, 2015), these may be good starting points.

Having indicated the potentially interesting effects that price promotions can have on reference prices the presented work adds to both academia and industry alike. In the case of the former, a number of theories are supported. First, the findings support the theory in the pricing research that proposes and highlights the cognitively biasing effects of pricing strategies (Ahmetoglu

*et al.*, 2010; Smith, 2015). In both studies it was confirmed that the method of framing the promoted price had a unique and potentially negative effect on decision utility. Furthermore, with an IRP effect indicated, this research adds to IRP research by supporting a number of IRP-based theories. Among the most obvious the findings support the theory that IRPs are highly malleable and that promotions can skew the internalised price after short exposure to them (King and Hicks, 2009). Malleability was also shown to be driven by a number of dimensions including exposure and environmental factors which aligns with Mazumdar *et al's.*, (2005) model of IRP formation.

Perhaps most interesting is the application of the findings to the main theories of IRP formation. Since the findings show an immediate and direct effect on product specific IRPs it could be that the findings support exemplar models in that the price manipulated is clearly not an average of many prices but perhaps just one sitting in a range of prices. Mathematically, if there the pre-exposure price had been a prototype average price then it stands to reason that the malleability effect would have been subtler. More likely however, is that the findings support Lowe and Alpert's (2010) theory that new items or unfamiliar prices are especially malleable given that no solid IRP exist for that product. Although the products used in the experimentation were chosen to be familiar to the participants it is likely that consumers have few IRPs for promoted version of products. After all, the promoted prices of products vary highly even within a retailer. Thus, it could be that because consumers were unfamiliar with the promotion that IRP malleability was so great. Lowe and Alpert's (2010) findings are further supported in that short promotions had a negative and direct effect on IRP malleability and decision utility just like in their study.

Finally, given the retail context, the findings also apply to industry and policy by providing an insight into the implications of pricing methods used. Organisations may find that drip pricing can inadvertently lower IRPs considerably and thus after a promotion may experience a downturn in sales. Similarly, since bundling invokes slightly less IRP malleability it may actually be a preferable method to use over drip pricing. Furthermore, the results have some interesting implications to policy and consumer education. For instance, the clear malleability effect highlights the extent of consumer biases and that prices should be processed in line with their promotional context. Based on the findings policy-makers can review if there is a need to further limit the use of certain biasing practices e.g. drip pricing and if consumer education would be useful in helping to empower future decisions.



In conclusion, these findings have been useful in understanding IRP formation and their use in determining purchase utility. The findings strongly reveal an IRP's potential for change, even subtle pricing practices having profound implications to the degree of that change. Having shown that promotional practices can significantly change IRPs and their effects on decision-making, other dimensions including demographics, personality and exposure time were also influential in furthering these outcomes. Considerable further work will be needed in assessing the validity and applicability of these findings. In particular, it has yet to be established if it is the IRP that informs the decision or rather simple gut intuition. Conducting research in this regard has the potential to have considerable implications to both the way consumers engage with promotions but also how retailers devise them. For instance, if consumers are aware that they need to internalise and segment prices carefully then actively studying the promotion, price and RRP for a few seconds longer may aid in accurate internalisation. Contrastingly, if retailers know that IRPs are malleable after even simple exposure then flash advertising prices to make other prices seem 'fair' could prove an invaluable sales tactic. The future research stream on this topic will hopefully consider these theoretical findings in such contexts.



# Chapter 5 – Brand Relationships on Promotional Decision

## Utility

### 5.1 Chapter Overview

After the successful evaluation of a product's essential information (e.g. price), the consumer must decide whether or not to make the purchase. Among the dimensions that can determine purchase decisions are emotive driven factors. Among these, Sinah (1994) theorises that brand factors, e.g. brand loyalty or identification are often the most dominant emotive drivers of many decisions. Moreover, the relationship's consumers have with brands have been shown consistently to be powerful predictors of purchasing behaviour (Chen, Newell, Kou, Zhang and Li, 2017). The importance and viability of brand relationships predicting promotional decision utility is supported in the literature. For instance, Laroche *et al's.*, (2003) cogno-affective theory proposes that promotional decisions are driven by an equal combination of cognitive and affective components.

**Chapter 3** and **4** considered the two cognitive components attributed to Laroche *et al's.*, (2003) theory, i.e. the method of information processing and the evaluation of key product attributes (e.g. price). Both chapters highlighted that consumers could make utilitarian decisions given the presence of certain trait combinations. For instance, intuition coupled with experience, financial literacy (see **Chapter 3**) and the ability to correctly compartmentalise a promotion's price has been shown to improve decision outcomes. Since price is the defining factor of any promotion the successful evaluation of a price's fairness should be the only decisive decision factor. This is especially so if the internal reference price determines the promotional price to offer 'value'. However, as has been made evident, a consumer's psychology has the potential to moderate a decision albeit how seemingly straightforward the decision may be. One such moderator is thought to be brand relationships.

The one element of the cogno-affective theory not yet been considered is the extent that affective dimensions, like brand relationships, impact promotional decision utility. The likelihood that a significant effect will be found is supported by the qualitative interview data which consistently identified brand relationships as a significant determinant of promotional purchasing in applied contexts (see **Chapter 2**). However, there is also support from the broader consumer literature. For instance, research has shown that strong brand loyalty can define a product's hedonistic or emotive

value, from which a decision can also be made (Cavusgil and Kim, 2014). Put simply, there many findings that show that consumers feel satisfaction and pleasure from loyalty-based purchasing despite knowing that they are paying more for an equal product. In essence, loyalty could be considered an end of itself, although is one that research finds to be fickle and later regretted. Furthermore, some studies find that decisions made on loyalty alone depress the importance and consideration of other typically more essential decision drivers like the price (Kuvaas and Kaufmann, 2004). Since promotions are driven by price, the potential lack of due consideration of such an essential utility defining component of these decisions has the potential to leave consumers particularly open to bias.

Despite loyalty potentially negating the importance of price in decisions, very little work has considered how relationship-based (emotive) decision drivers influence the effect of IRP (quantifiable) benchmarks in the decision process. From the literature that does exist (Allenby and Lenk, 1995), a rationale has been proposed that would support a relationship between the two. More specifically, both **Chapter 4** and the previous literature has shown that the malleability of IRPs can cause an internalised price for a product to be distorted. The cause for the distortion is often from the purchase environment, e.g. exposure to advertising claiming false messages or because the consumer fails to internalise both price and context together. Should the distortion be significant then consumers experience 'sticker shock' upon seeing the advertised price.

In instances where 'sticker shock' is particularly dominant, or the IRP is yet to be fully defined, the literature has shown that the complexity of evaluating a prices fairness may, in fact, encourage cognitive load (Homburg, Totzek and Krämer, 2014). In other words, if consumers experience a price that does not meet their expectations, they will try to rely on the prices of other items or experiences to assess if the price is fair. Should the item be new to them and the consumer has few or no prices to benchmark against the current price they are left confused. As similar research points out, confusion in decisions materialises in the form of cognitive load (Homburg, Totzek and Krämer, 2014). High cognitive load increases the likelihood that the decision will be driven by emotive factors, such as brand loyalty or brand status. Ergo, IRP malleability may promote not only promote bias itself to the decision but exasperate it in that emotive reasoning ends up driving the decision. The possibility of this notion will be directly tested in the second forthcoming study.

With the detrimental effects of brand relationships on decision-making to be well documented, similar effects could be observed in promotional contexts (Joshy and Sivakumaran, 2009). Despite this assumption, no work has considered the role of brand relationships on promotional decisions. In fact, the only studies on the topic find promotions to deteriorate brand loyalty (DeIVecchio, Henard and Freling, 2006; Mela, Ataman and Van Heerde, 2006). Thorough research thus has the potential to add applied insights to the brand relationship literature. It should also consider if there is a cyclical effect between brand relationships, promotional effectiveness and price expectations. For instance, findings suggest that promotions increase price sensitivity, which if unabated can decrease loyalty (Koschate-Fischer, Cramer and Hoyer, 2014). Because promotional purchasing could now be considered a social norm (Mendez, Bendixen, Abratt, Yurova and O'Leary, 2015) consumer loyalty is suggested to rest on the retailer being able to provide the consumer with the best price. As such, loyal consumers may also seek and consume promotions more frequently thereby increasing their propensity to the bias associated with deal proneness. Based on a mirage of disparate findings, the assumptions regarding the effect of brand relationships on promotional decisions is speculative. The influence of brand relationships to promotions and decision utility is resultantly tested across two studies.

*Study 1* tests the influence of switching, identity and loyalty on decision utility across practices. It also considers if these facets load into a single factor that some scholars have named 'brand affinity' (Bloxham, 1998). In the simplest form the brand relationship literature has shown that high affinity can increase value perceptions and encourages purchasing before a product is evaluated (Bain and Moutinho, 2011; Godey *et al.*, 2012). Moreover, if the product is 'psychologically distant' (i.e., perceived to be far in the sense of being able to purchase it readily), loyalty may increase purchase intent irrespective of the costs associated with the distance (Liberman, Trope and Wakslak, 2007). As such, it is hypothesised that strong brand relationships will increase the chance of fallible, sub-optimal, decisions. Given the different practice-specific decision outcomes shown in each chapter, similar effects are likely to be seen here.

*Study 2* aims to build upon the findings of the first while also considering how IRP malleability could interact with brand affinity to further affect decision utility. Since no studies have investigated how IRP's might predict and interact with affinity, the hypotheses here are mostly exploratory. Given that IRPs are typically determinants of a purchase's perceived monetary value

those particularly prone to IRP malleability are less likely to be certain in their decision-making abilities. These consumers are likely to rely on emotive decision drivers such as brand loyalty. Since malleability degraded utility in **Chapter 4** it is predicted that strong brand relationships will interact with malleability levels to further hamper utilitarian decision outcomes.

## 5.2 General Introduction

Prior research has suggested that brand relationships are powerful drivers of purchasing intentions. Two of the central components that define strong brand relationships are brand identification and loyalty. Brand identification is the self-imposed affiliation of a consumer's personal and social values with that of a brand (Aguirre-Rodriguez, Bosnjak and Sirgy, 2012; Ferreira and Coelho, 2015). Meanwhile, brand loyalty can be considered an emotive or transactional-based fidelity that is measured by consistent purchasing of the brand (Corstjens and Lal, 2000). Recent research has shown that both traits positively influence purchase utility by increasing the hedonistic gratification gained from product consumption (Coleman, de Chernatony and Christodoulides, 2015; Strizhakova, Coulter and Price, 2011). However, some research has found that loyal consumers make more hedonistic decisions that can lead to the purchase of comparatively inferior products (Mendez *et al.*, 2015). Consequently, it could be argued that brand loyalty and similar components of brand relationships (e.g., brand identification) may inadvertently and unfavourably bias decisions.

Considered together, brand identification and loyalty interact to create what some scholars call "brand love" (Batra, Ahuvia and Bagozzi, 2012; Brakus, Schmitt and Zarantonello, 2009). Research on this construct has found that high levels of brand love diminish the importance of typically important decision factors such as monetary cost (Phillips, McQuarrie and Griffin, 2014). Cost is particularly significant in determining a purchase's value for many consumers and, if neglected, may leave consumers open to being duped into buying inferiorly priced promotions.

Promotions, or price-framing techniques that claim to offer consumers value for their money, promote decision bias through a robust price-value heuristic. Consumers typically view promotions in the crude sense that the more significant the discount the greater the value for money (VFM) (Ayres and Nalebuff, 2003; Burman and Biswas, 2007; Kim and Kramer, 2006; Robbert and Roth, 2014; Shampan'er and Ariely, 2006). Consequently, when the price is not considered prudently consumers often accept promotions that offer little value for their money (Ahmetoglu, Furnham and Fagan,

2014). Similarly, a lack of consideration of the price and its promotional context can lead to the discounted price being internalised as representative of the market. Using the falsely internalised price in later price evaluations can also bias decisions as was shown in **Chapter 4**.

In sum, research has indicated that both brand love and promotions can have an interesting and potentially damaging impact on accurate, efficient, decision-making. However, although there exists abundant literature on brand relationships, few papers have directly explored the implications of these behaviours on utilitarian decision-making. Furthermore, the literature on promotions is still largely exploratory (Ahmetoglu, Furnham and Fagan, 2014) and has yet to consider how these brand relationships affect decision-making in promotional contexts. The present research probes these notions in light of the ‘big four<sup>2</sup>’.

### **5.3 Literature Review**

In the consumer literature, ‘satisfactory’ decision-making is mostly dependent on the individualistic weighting of product attributes (Gigerenzer and Gaissmaier, 2011; Lee and Marlowe, 2003). Among these features, the price is often among the most heavily weighted (Bakewell and Mitchell, 2003; 2004). For instance, Watson (2009) found that price often accounted for over 40% of the variance in purchasing decisions. As such, the outcome of saving money is frequently a significant determinant of choice across consumer segments. Therefore, one could say that when consumers achieve the aim of saving the most money, they are making an economically satisfactory purchase decision (ESD). On the other hand, economically unsatisfactory, or biased, purchase choices (EUSD) are those that offer less, if any, monetary savings.

#### **5.3.1 Brand Relationships**

Research on the moderators of monetary-driven decision outcomes has highlighted the importance of brand relationships. The literature surrounding such relationships commonly concerns itself with brand identification, loyalty, and the likelihood of switching (Bian and Moutinho, 2011; Coelho, Rita and Santos, 2018; Madhavaram, Badrinarayanan, and McDonald, 2005; Nam, Ekinci and Whyatt, 2011). Brand identification, or identity, describes situations in which consumers identify a parallel between their values and those of the brand (Kim, Han and Park, 2001; So, King, Hudson and Meng,

---

<sup>2</sup> Big Four – Bundling, BOGDIF, Value-Based Pricing and Drip Pricing

2017). In brand identification, consumers transfer their sense of self onto that of the brand, thus increasing the social and personal gratification gained from consumption. Furthermore, identification has been shown to foster repeat purchasing and thus brand loyalty (Coelho, Rita and Santos, 2018; Kuenzel and Halliday, 2010). Taken together, these findings help explain recent brand trends. For instance, the success of APPLE could be considered to rest with the number of consumers identifying with the brand's values of innovation, style and aesthetics. Such identification has led to phenomenal increases in sales and brand loyalty despite competitors offering superior and cheaper products (Badrinarayanan, and Laverie, 2011; Yeh, Wang and Yieh, 2016).

Explaining these effects some research suggests that brand identification fulfils two maxims. First, purchasing from a brand such as APPLE offers social gratification to identify consumers. These consumers do not just identify with the brand but the group of similarly keen APPLE consumers (Yeh *et al.*, 2016). It could subsequently be argued that purchases offer consumers social status and acknowledgement within the group that encourages more purchasing of a similar kind (Vigneron and Johnson, 2017). While the gratification gained from these social sources can indeed be relevant to many consumers, thus offering utility, it can equally leave them vulnerable to purchasing for the sake of appeasement rather than need. According to Shukla, Banerjee and Singh (2016), the commitment bias is exceptionally strong when purchasing for social reasons, consumers feeling committed purchasing in the same manner, type and frequency as others in the group.

Second, identifying with a brand offers the consumer personal gratification. Kuenzel and Vaux Halliday (2008) for instance explain that a consumer can identify with any number of brands but that purchasing from these brands is often driven by a sense of excitement, exhilaration, accomplishment and satisfaction. Phua, Jin and Kim (2017) support this notion finding that different social media platforms offered consumers varying degrees of personal gratification that directly lead influenced brand identification driven purchasing. For instance, purchase intent of Twitter and Instagram users correlated with high brand community identification (i.e., the identification with a social group affiliated with a brand). Although purchasing based on brand community identification can provide utility in of itself, e.g. social status or becoming part of a social group, there is a rationale that the anticipation of being rewarded with these may lead consumers to make choices not aligned with their actual needs. For instance, it is documented that consumers may buy products despite no inherent utilitarian need to remain a part of the social identification group (Aluri, Slevitch and



Larzelere, 2015; Chiu, Wang, Fang and Huang, 2014). Although it could be argued that such purchases offer social utility, Kalymon's (1971) seminal work states that the only real directive of purchase utility is to fulfil an inventory need, i.e. buying something that one needs. Not doing so, is shown to offer only short-term gratification that, upon later reflection, often leads to dissatisfaction. This notion is supported in more recent work (Masoom, Pasha and Asif-Ur-Rahman, 2015). Such purchases could, therefore, be argued as being biased.

Brand loyalty can be described as a positive relationship between the consumer and the brand or retailer. Its magnitude can be defined by the extent to which the consumer shows continued support for the brand through consistent purchasing (Corstjens and Lal, 2000). Because of brand loyalty, the likelihood of switching to alternative products—the behaviour commonly associated with disloyal consumers—is mitigated (Pappu and Quester, 2016). Loyalty has been found to be a strong predictor of repurchasing and also encourages brand identification. For instance, some research has suggested that engaging with a brand allows consumers to assess the congruence of a brand's ethos and values with their own (So, King, Sparks and Wang, 2013). Moreover, recent studies have highlighted the importance of social media in solidifying strong brand relationships through a combination of loyalty and identification behaviours. Coelho *et al.*, (2018) for instance showed that in fast moving consumer goods (FMCG) contexts, social media engagement encouraged positive attitudes towards brands e.g. loyalty and trust. Furthermore, their research showed that identification with a brand played a central role in transforming social brand interactions into purchasing action. Zheng, Cheung, Lee and Liang (2015) support this notion by finding that the encouragement social engagement in online communities can significantly strengthen brand relationships for online and, perhaps even, in-store sales. Taken together, a bidirectional relationship between brand relationship behaviours has been suggested, one where loyalty predicts identity and vice versa (Batra, Ahuvia and Bagozzi, 2012).

When conceptualizing the behaviours associated with brand relationships (e.g. repurchasing and engagement) together some scholars have theorised the concept of brand love (Batra, Ahuvia and Bagozzi, 2012), brand romance (Patwardhan and Balasubramanian, 2011), or brand affinity (Bloxham, 1998). Each variation of the construct has been indicated as influential to utilitarian decision-making (Bergkvist and Bech-Larsen, 2010). Batra *et al.*, (2012), for instance, found that consumers with a strong love for a brand purchase frequently, do not switch even if the price is better and purchase without explicitly searching for other options. Moreover, research on this construct has

found that high levels of brand love diminish the importance of typically important decision factors such as monetary cost (Phillips, McQuarrie and Griffin, 2014). Cost is particularly significant in determining the value for many consumers and, if neglected, may leave consumers open to being duped into buying inferiorly priced products, i.e. those that are more expensive than the market average. Consequently, the lack of due consideration of other purchase options leaves the consumer open to bias should say, the price be higher than in other retailers.

Despite an array of research aiming to develop our understanding of brand love and affinity, both terms need considerable development. This is especially as the descriptions of these dimensions often fail to agree on the importance of well-established brand-related behaviours (e.g. loyalty and identification) in making up the dimension. For instance, the original concept of brand love stems from the notion that interpersonal love can be applied to brands as much as they can to people. Shimp and Madden (1988) were among the first to apply human relationships to branding, suggesting that brand relationships are based on the same three components: intimacy, passion and decision commitment. By meeting all three requirements they suggest that brand loyalty and identification are built. However, some work disputes the notion that loyalty behaviours are an integral part of brand love. Whang, Allen, Sahoury and Zhang (2004) for instance suggest that to agree with this approach that the decision commitment component would need to be dropped while Fournier (1998) suggests that love is comprised of six factors ranging from passion to engagement. Schlobohm, Zulauf and Wagner (2016) attempted to evaluate the empirical work on this topic to provide support for any one of the theories, only to find that many of the critical brand love frameworks are criticised for not providing a coherent research frame that states explicitly which factors make up the dimension.

Because of this disparity, many definitions of brand love exist. Carrol and Ahuvia (2006) suggest that it is *'the degree of passionate, emotional attachment that a satisfied consumer has'*. In contrast, Keh, Tat, Pang and Peng (2007) defined it *'as the intimate, passionate, and committed relationship between a consumer and a brand, defined by its reciprocal and dynamic properties'*. More recently, Rossiter (2012) defines brand love as *'achieved only when deep affection and separation anxiety are jointly felt'*. However, all of these definitions are criticised in that they still fundamentally describe the components of interpersonal love. As a result, Bergkvist and Bech-Larsen (2010) enlarged the framework by including brand identification and social ties. Although there is no work directly validating the inclusion of these dimensions in the review by Schlobohm *et al.*, (2016) note that no one definition yet exists to demarcate the strong brand relationships. This is supported in

that some scholars assume a link between emotional brand attachment, or affinity, and brand love (Carroll and Ahuvia 2006) while others suggest a clear separation (Hwang and Kandampully 2012). While the latter can be interpreted as brand liking, where the consumer has positive feelings for a brand, the two concepts vary in their intensity, occurrence and experienced length (Cattoll and Ahuvia 2006). Despite there being differences, however, Schlobohm *et al.*, (2016) note that in a general sense one can say that any customer-brand relationship is one form or another a romantic one.

Based on the findings, there is a rationale to consider brand 'love' or other such terms as a multifaceted dimension. This dimension likely consists of a number of the already well-defined traits that make up our understanding of brand relationships. Further understanding which factors combine to create a valid dimension of brand relationships is still needed, however. One way of doing this would be to start by looking at the main behaviours commonly used to describe to brand relationships thereby helping to alleviate this research gap. This paper shall start by further exploring the plausibility of factoring the three most prominent relationship behaviours (loyalty, identification and switching) into one dimension.

### **5.3.2 Promotions and Brand Relationships**

Promotion research considering brand relationships has primarily focused on the relationship as the outcome variable (Lewis, 2004). One consistent finding in this literature is that promotions decrease brand loyalty as a result of price expectations (Ailawadi, Lehmann and Neslin, 2003; DeVecchio, Henard and Freling, 2006; Mela, Ataman and Van Heerde, 2006;). Specifically, loyalty has been positively associated with price sensitivity due to consumers expecting a reward from repurchasing. According to the literature, consumers expect promotions and discounts as a result (Allenby and Lenk, 1995; Mela, Gupta and Lehmann, 1997). As prices can be mostly non-differentiable between retailers, especially for branded goods, a retailer's failure to satisfy high price expectations can diminish loyalty behaviour (Koschate-Fischer, Cramer and Hoyer, 2014). Although the effect of promotions on loyalty is well established (Blut, Beatty, Evanschitzky and Brock, 2014), still very little is known about how loyalty or affinity influences promotional purchasing itself.

Despite this research gap, there is evidence to support a plausible relationship between the two. In fact, it has been suggested that higher price sensitivity and promotional expectancy among loyal consumers is linked with a tendency to be "deal-prone" (Mela, Gupta and Lehmann, 1997). The

theory of deal-proneness suggests that some consumers may have a personality trait that increases their tendency to seek and unflinchingly accept promotions offered by retailers (Cavusgil and Kim, 2014). Purchase intentions in response to promotions were notably high for loyal consumers, even when the promotions offered no superior value for one's money (Arora, 2008). Since loyalty increases price sensitivity, which in turn is associated with promotion seeking and acceptance (Allenby and Lenk, 1995), it could be argued that high loyalty may indirectly, or even directly, have a significant effect on decision outcomes. In considering this possibility, the relationship between brand relationships and *adjustment bias* proves insightful in determining possible research avenues.

Research on the relationship between adjustment-level bias and brand loyalty indicates that people who are partial to emotion-based reasoning also tend to be negligent in making these price adjustments (Furnham and Boo, 2011). It could thus be argued that loyalty, a fundamentally emotive construct, may have a significant effect in biasing decisions for adjustment-reliant promotions such as bundling, drip pricing and value-based pricing. This claim has not been validated in the literature, however, and the interaction between brand relationships and promotional purchasing has not yet been explored. Furthermore, research on the relationship between adjustment bias and brand loyalty further supports a brand affinity – promotional link. Such research indicates that people who are partial to emotion-based reasoning tend to be extra negligent when making price adjustments (Furnham and Boo, 2011) and that being psychologically attached to brands can affect what, when and how products are bought (Lam, Ahearne, Mullins, Hayati and Schillewaert, 2013; Lin and Sung, 2014; Tanford, Raab, and Kim, 2012). It could, therefore, be argued that loyalty, a fundamentally emotive construct, may have a significant effect in biasing decisions. This may be especially the case for adjustment-reliant promotions such as bundling, drip pricing and value-based pricing. Since drip pricing is especially reliant on adjustment and multiple calculations there is a particularly strong chance that consumers will revert to emotive purchasing. However, this claim has not been validated nor explored to any depth in the literature.

### **5.3.3 Other moderators of in-store decision utility**

Additional moderators of effective promotional decisions are financial literacy and conscientiousness (Bernheim, 1998; Lusardi and Mitchell, 2007; Smith and Stewart, 2009). The former is often found to be lacking in the general population, despite it considerably improving the ability to evaluate price fairness. In the general decision-making literature, conscientiousness and neuroticism promote

decision accuracy by encouraging consumers to process and evaluate choices with greater diligence. This finding is consistently supported (e.g., see Hess and Bacigalupo, 2011; Smith and Levin, 1996). However, these findings have not yet been translated into the field of promotions and so warrant testing. Moreover, other more recently introduced decision drivers, such as psychological distance, have also not yet been considered in these contexts (Liberman, Trope and Wakslak, 2007).

Psychological distance is the perceived distance to the product, be it temporal or physical (Kim, Zhang and Li, 2008; Trope, Liberman and Wakslak, 2007). The literature on this topic has generally suggested that distal objectives invoke greater purchase costs and are thus seen as less attractive. Recent work has supported these notions with distance significantly decreasing purchase likelihood but increasing price sensitivity (Liberman *et al.*, 2007). However, Bornemann and Homburg (2011), showed that distance promoted the acceptance of uneconomically high price increases where payment was framed as due later. Such a result stemmed directly from the payment due date and has not been replicated outside of this context. As a result, research has shown that distal costs induce greater dissatisfaction and sense of monetary loss if not adequately accounted for (Dhar and Kim, 2007; Goodman and Malkoc, 2012). With respect to promotions, distance effects are likely to be either reversed or non-existent. Specifically, it stands to reason that since promotions always require immediate payment, the effects of distal costs will be mitigated. Moreover, because promotions are often time-limited and offer immediate value, the desire to benefit from a discount may override any distance effects. As such, various distance-related effects are plausible, none of which have been fully considered in promotional contexts.

Adding to the research needed, no work has considered the relationship between IRPs and brand relationships. This research gap is despite both factors playing a pivotal role in making a purchase. Laroche *et al.*, (2005) for example suggest that IRPs form the quantitative monetary element of a purchase that drives economic value while brand relationships, which stem from emotive sources, drive personal value. Considering IRPs and brand relationships together, 'fair' or representative IRPs may encourage the likelihood of affiliating brands with one's identity. This hypothesis stem from the notion that 'fair prices' can mitigate cognitive dissonance, with 'good' prices or positive 'sticker shocks' encourage repurchasing (Nunes, Bellin, Lee and Schunck, 2013) and brand loyalty (Patwardhan and Balasubramanian, 2011). This is a finding that is consistent and well established (e.g., Drolet and Frances Luce, 2004). Consequentially, it stands to reason that increased

IRP malleability and subsequent sticker shock may encourage a similar bias. IRP malleability may therefore positively interact with strong brand relationships to bias decision utility even more. However, the relationship may also be bi-directional. For instance, research has also suggested that brand loyalty can skew brand perceptions (So, King, Sparks and Wang, 2013) which may support the hypothesis that it too could influence IRP malleability. Given the findings in **Chapter 4**, study two in the chapter considers if strong brand relationships can override IRP based price evaluations that determining the price to be 'unfair'.

### **5.3.4 General aims and hypotheses**

A review of the previous findings reveals several research gaps that warrant investigation. First, terms such as brand 'affinity' or 'love' are mostly undeveloped. There is debate as to which behaviours constitute these terms and whether to view the terms as descriptors of a single behaviour or a combination of multiple behaviours. This thesis proposes that brand affinity should start to be considered as a single dimension composed of many behaviours, including brand identification, loyalty, and switching likelihood. The reasoning for this approach stems from two rationales.

First, similar terms (e.g. brand love) are mostly undeveloped and so offer room to explore alternative definitions. Research has already found that combinations of behaviours, e.g. loyalty and identification have implications to decision outcomes. As such, it is worth considering the extent that these traits factor together to create a latent dimension. In exploring the plausibility of this dimension, the aim is to show how affinity can impact decision outcomes for promotions. To date not work has considered the effect of single brand relationship behaviours, e.g. neither loyalty nor holistic terms, e.g. brand love on promotional purchasing. Research on brand love implies the possibility of a detrimental effect on consumer decisions, but further validation is needed. Conducting this research will add novel findings to both the brand relationship and decision literature.

Second, promotions have been shown to increase bias-prone decisions. As such, investigating ESDs and brand relationships in a promotional context will offer a perspective that has not previously been considered in the literature. Since no previous studies have compared the effects of promotional practices on decision utility such a study will build on existing research in this thesis. Examining and comparing each practice's effect on decision-making is particularly crucial in elucidating how brand loyalty schemes can influence promotional success. Moreover, such a study will build on the

consumer literature in the area by lending credence to the theory that brand relationships can be particularly biasing to decision outcomes. The moderating effect of psychological distance and IRPs in these decisions will also be ascertained in light of the increasing interest by the literature and findings presented in **Chapter 4**. Should a relationship be found then the link between the cognitive and affective dimension in Laroche et al's., (2003) theory may be supported. Considering the importance of this emotive element will be vital in creating a hypothetical model of promotional decision-making (see **Chapter 6**).

## **5.4 Study One**

### **5.4.1 Aims and Hypotheses**

The upcoming study shall attempt to ascertain the validity of brand affinity as a single dimension of identity, loyalty and switching likelihood. Moreover, it will attempt to establish how this dimension, if validated, can influence decision utility in the presence of promotions. The moderation effect of psychological distance to these decisions shall also be ascertained. Based on prior research it is therefore expected that positive associations will be found among brand identification, loyalty, and switching likelihood ( $H_1$ ). The aim is that these associations will factor into a single latent dimension that can be labelled 'brand affinity'. Increases in brand affinity are hypothesised as being associated with the likelihood of making EUSDs because emotive affections and preferences dominate decisions ( $H_2$ ). It is also expected that perceived distance and price differences will be significant in predicting the likelihood of an EUSDs ( $H_3$ ). Although the influence of price promotions on decision utility remains exploratory the underlying complexity of evaluating each promotion type remains the predictive factor. Based on this, it is suggested that drip pricing, being the most cognitively complex of the four, will have the most significant effect on the utility of decisions, with bundling, value-based pricing, and BOGDIF following suit ( $H_4$ ).

## **5.5 Method**

### **5.5.1 Participants**

The analysed sample consisted of 284 participants from the UK, including a cohort of working adults ( $n = 158$ ) and students ( $n = 126$ ). The sample of working adults was recruited through direct contact with the organisation's CEO. Ten organisations were contacted with four from the service sector committing participants. The student cohort came from a variety of higher education institutions and were sourced via the online research database SMARTSURVEY. The gender balance in the study

was equal (Males=51%, Females=49%). Participation was voluntary with no explicit inclusion criteria being used. Working adults involved in finance-related roles at their companies were removed from the participant pool ( $n = 12$ ). This was because of the presupposition that these consumers would possess highly developed financial literacy, which is uncommon the general population but can have a considerable effect on decision-making ability (Lusardi, 2008). A mix of working adults and students would help provide a more diverse cohort consisting of GEN X, Y & Z.

Descriptive statistics revealed the sample to be equally divided between genders, with a mean age of 35 years ( $SD = 11.25$ ) and of middle social class ( $M = 5$ ,  $SD = 1.63$ ). The average income ( $M = £35,230$ ,  $SD = £7,777$ ) was above the national UK average of £26,500. Most participants had obtained at least secondary school qualifications (72%), and they tended to shop equally for essentials (56%) and nonessentials (44%). Retailer preferences indicated Tesco's to be the most favourite supermarket (selected by 35% of participants) with Iceland being the least favourite (10%). However, participants indicated Sainsbury's to be the retailer they used most frequently (37%).

### **5.5.2 Design/Materials**

A  $2 \times 2$  (retailer preference  $\times$  distance to the alternative) between-subjects design was employed. Allocation to both conditions was randomised. Retailer preference was differentiated by "least favourite" versus "favourite" and distance by "quite far" (i.e., 20 min) versus "quite close" (5 min). In the former condition, participants were directed toward visiting either their favourite or their least favourite retailer first. The grocery supermarkets included in the study, with which the brand relationship items were connected, had to have a minimum of 1% UK market share. The distance condition was framed temporally, with the physical distance to the store being an identical 3 km from the start location (the participant's home). One trip took more time than the other due to traffic conditions thus making distance a psychological rather than physical dimension. The time cost was operationalised as £0.05 per km or approximately 8 cents per minute in USD (\$) at the time of the study.

The 36-item questionnaire consisted of five sections: RRP exposure, demographics, personality measures, brand affinity measures, and purchase intent. A 5-page new product and promotional brochure, containing the RRP's of the products used in this study, was created (*see* Appendix 9 for an example). The adopted colour scheme was predominantly red, green and yellow to



be distinct from that of any of the large grocery retailers in the UK. Personality was measured using a brief measure of the 'big five' known as the ten-item personality index (TIPI - Gosling, Rentfrow and Swann, 2003).

Questions on brand identification, loyalty, and switching costs were selected and adapted from previously developed single-dimension constructs. Where the items were associated with brands they were reframed to be directed toward retailers i.e., UK grocery supermarkets. The company identity scale (Aaker, Fournier, and Brasel, 2004) constituted six items, for example, "This supermarket fits well with my current stage of life," with answers being given on a 5-point Likert scale ( $\alpha = 0.912$ ). The company loyalty scale (Sirdeshmukh, Singh, and Sabol, 2002) constituted seven items, for example, "I believe that using this store is preferable to other retailers ( $\alpha = 0.903$ ), and the switching likelihood scale (Burnham, Frels, and Mahajan, 2003) had six items, for example, "Switching to a new service provider will probably involve hidden costs/charges" ( $\alpha = 0.905$ ).

Two fictitious purchase scenarios were created to assess the attainment of ESDs. Each scenario was differentiated by price in order to test for price magnitude effects. In purchase scenario one items were given a "high price" (10% above the market RRP) whereas in scenario two an "equal price" (same as the market RRP). In all instances the alternative to making the immediate purchase was to travel to an alternative store which offered a further discount. Travel provided savings even with the cost of travel being noted as £0.05 per km, thus representing an ESD. Products were chosen for each promotional condition based on real promotions at the time of experimentation. Promotions were framed as they would be in-store and were manipulated to provide the consumer with unrepresentative prices (*see Appendix 2*) Intentions to purchase the promoted items (*see Table 30*) were measured using three items (Baker and Churchill, 1977), attributed a high reliability ( $\alpha = 0.81$ ) and assessed on a 7-point Likert scale from *very unlikely* to *very likely* (Neese and Taylor, 1994; Stafford, Stafford, and Day, 2002).

**Table 30.**

Summary of the randomly allocated between-subject scenarios and conditions split by retailer preference, price difference, and perceived distance.

Within-Groups Conditions			Between-Groups Conditions
1a	Healthy Muesli (Control <sup>1</sup> )		
2a	Imported Spanish Salami (Drip Pricing <sup>2</sup> )	Large Price Difference (+10%)	1. Favourite Retailer + Large Psych. Distance
3a	Fine Red Wine (Value-Based <sup>3</sup> )		
4a	Color Fix Shampoo (BOGDIF <sup>4</sup> )		
51	4x 0% Yogurt Pack (Bundling <sup>5</sup> )		2. Favourite Retailer + Minimal Psych. Distance
1b	Butter (Control)		
2b	Imported Spanish Wine (Drip Pricing)	Equal Price Difference (+0%)	3. Least Favourite Retailer + Minimal Psych. Distance
3b	Quantum Power Batteries (Value-Based)		
4b	1l Coca-Cola (BOGDIF)		
5b	Luxury Toilette Roll (Bundling)		4. Least Favourite Retailer + Minimal Psych. Distance

Control<sup>1</sup> = No promotion; Drip Pricing<sup>2</sup> = Price + 15% VAT and 10% price card charge; Value-Based<sup>3</sup> = e.g., “Save \$1, regular retail price \$6”; BOGDIF<sup>4</sup> = Buy one item, get one free; Bundling<sup>5</sup> = “Get this great deal and save.”

### 5.5.3 Procedure

Participants studied the product and promotional brochure for up to three minutes to prime them with the RRP of products used in this study. Simple demographic and personality information including age, gender, education level, and personality was obtained. Purchase habits, focusing on purchase frequency and supermarket presence, were assessed along with indices of brand identification, retailer loyalty and switching costs. These questions were directed toward the participants favourite retailer.

The conditionally dependent purchase scenario was then presented. Each scenario indicated the cost of travel (£0.05 per km), the current store position (favourite or least favourite), the store typology (upper tier superstore), and the approximate distance or time commitment to reach the store (5 min versus 20 min). Prices for each product were displayed, and participants indicated how likely they were to buy the item in the current store and/or to drive to the alternative store. If participants drove to the alternative store, they were warned that subsequent product choices would be subject to a delay of either 2 min (near condition) or 5 min (far condition). This process was repeated in a second scenario, followed by two supermarket satisfaction questions.

## 5.6 Results

The results were analysed using SPSS 13 and begun by considering the descriptive statistics surrounding the brand relationship indices. Descriptive statistics showed brand identification ( $M = 18.8$ ,  $SD = 6.38$ ), loyalty ( $M = 24.12$ ,  $SD = 6.92$ ), and switching cost ( $M = 27$ ,  $SD = 7.51$ ) to be relatively high and similar. This points to a polymorphic relationship as hypothesised. EUSD scores were derived from likert scale purchase judgments made by those participants who decided not to delay purchasing. Only 20 of the participants (11%) were willing to delay purchasing and thus make a utilitarian decision. These 20 participants were situated in the “least favourite store” condition and considered themselves to have moderate brand affection (e.g.,  $M = 13.4$ ,  $SD = 2.68$  for brand identification). Participants making economically satisfactory decisions (ESDs) were removed from the subsequent analysis to determine the factors influencing fallible decisions. Specifically, drip-priced ( $M = 20.0$ ,  $SD = 8.21$ ) and BOGDIF-promoted ( $M = 19.22$ ,  $SD = 4.23$ ) items seemed, at first glance, to increase EUSDs the most. All practices significantly increased EUSD purchase intentions in comparison to non-promoted items ( $M = 14.2$ ,  $SD = 4.08$ ) (see Figure 11).

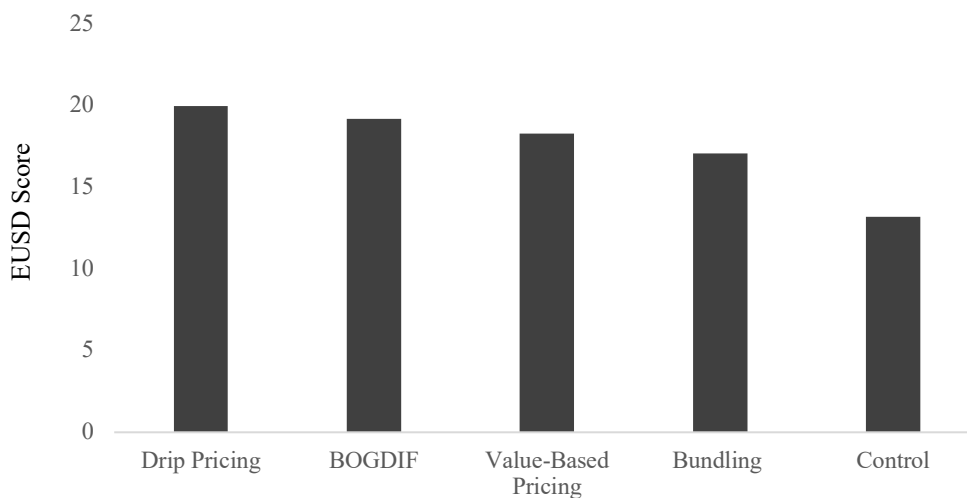


Figure 11. Histogram depicting EUSD as a function of the promotional practice.

Significant positive correlations were observed between brand identification and loyalty ( $r = 0.471$ ,  $p < .001$ ), loyalty and switching ( $r = 0.708$ ,  $p < .001$ ), and identity and switching ( $r = 0.511$ ,  $p < .001$ ). As such, the positive co-dependent relationship between the three affection-based facets seems supported. Using principal-axis factor analysis, with direct-oblimin rotations, the three measures successfully loaded into a single dimension that accounted for 76% of the variance (see Table 31). This factor was duly named “brand affinity.”

**Table 31.**

Factor analysis of brand identification, loyalty, and switching items using principal-axis factoring and direct-oblimin rotation.

		Communalities		Factor Loadings
		Initial	Extraction	
Brand Identity Items <sup>1</sup>	The retailer connects with the part of me that really makes me tick.	0.72	0.37	0.61
	The retailer fits well with my current stage of life.	0.58	0.37	0.61
	The retailer says a lot about the kind of person I would like to be.	0.62	0.31	0.56
	Using this retailer lets me be a part of a shared community of like-minded consumers.	0.60	0.31	0.56
	I have become very knowledgeable about the retailer and what they stand for.	0.58	0.34	0.58
	The retailer makes a statement about what is important to me in my life.	0.63	0.33	0.58
Brand Loyalty Items <sup>2</sup>	I could easily switch from my favourite retailer to another store (r).	0.63	0.57	0.75
	I am a committed shopper at my favourite retailer.	0.62	0.56	0.75
	I feel a sense of loyalty to my favourite retailer.	0.58	0.55	0.74
	Do you do most of your future shopping at this store?	0.58	0.45	0.67
	Would you recommend this store to friends, neighbours, and relatives?	0.67	0.60	0.77
	Would you use this store the very next time you need to shop for groceries?	0.62	0.55	0.74
	Do you spend more than 50% of your grocery budget at this store?	0.59	0.53	0.73
Brand Switching Items <sup>3</sup>	I worry that the service offered by other service providers will not work as well as expected.	0.56	0.53	0.73
	If I try to switch service providers, I might end up with bad service for a while.	0.62	0.55	0.74
	Switching to a new service provider will probably involve hidden costs/charges.	0.54	0.45	0.67
	I am likely to end up with a bad deal financially if I switch to a new service provider.	0.55	0.51	0.71
	Switching to a new service provider will probably result in some unexpected hassle.	0.58	0.56	0.75
	I do not know what I will end up having to deal with while switching to a new service provider	0.60	0.56	0.75

Factor 1 (brand affinity) = 10.60, 76.6%

<sup>1</sup> = Aaker, Fournier, and Brasel (2004)

<sup>2</sup> = Sirdeshmukh, Singh, and Sabol (2002)

<sup>3</sup> = Burnham, Frels, and Mahajan (2003)

Utilizing a multivariate analysis of covariance (MANCOVA), the effect of brand affinity was tested as a covariate in predicting EUSDs for each of the promotional practices (Table 31). A statistically significant MANCOVA effect was obtained for brand affinity ( $F(5,261) = 15.45, p < .001, \text{Eta}^2 = 0.348$ ), retailer preference ( $F(5,261) = 5.75, p < .001, \text{Eta}^2 = 0.166$ ), and psychological distance conditions ( $F(5,261) = 5.00, p < .001, \text{Eta}^2 = 0.147$ ). The interactions between distance and retailer preference ( $F(5,261) = 8.02, p < .001, \text{Eta}^2 = 0.217$ ) and between affinity and retailer preference ( $F(5,261) = 34.54, p < .001, \text{Eta}^2 = 0.545$ ) suggest that EUSDs are highly likely when one is using a preferred retailer, which increased the bias generated by brand affinity when distance was high.

Overall, the predicted influence of affinity in predicting biased choices was supported. Moreover, the significant effect of gender ( $F(5,261) = 3.404, p < .001, \text{Eta}^2 = 0.105$ ) and agreeableness ( $F(5,261) = 2.25, p < 0.05, \text{Eta}^2 = 0.072$ ) points to the potential influence of demographic and psychographic factors. Notably, however, brand affinity ( $\text{Eta}^2 = 0.348$ ), retailer preference ( $\text{Eta}^2 = 0.166$ ), and distance ( $\text{Eta}^2 = 0.147$ ) were the most effective of the dimensions in predicting EUSDs.

**Table 31.**

MANCOVA depicting the significance of predictor variables in their effect on the canonical variable of EUSDs, a combination of promotionally presented items.

	Pillai's Trace Value	F	Sig	Partial Eta <sup>2</sup>
Intercept	.001	0.024	1.00	.001
Gender	.105	3.404	<b>.006</b>	.105
Age	.019	0.569	.724	.019
Income	.019	0.552	.736	.019
Social Class	.036	1.088	.369	.036
Highest Level of Education	.016	0.466	.801	.016
Brand Affinity	.348	15.447	<b>.001</b>	.348
Agreeableness	.072	2.251	<b>.050</b>	.072
Conscientiousness	.015	0.456	.808	.015
Extraversion	.014	0.412	.840	.014
Neuroticism	.011	0.31	.906	.011
Openness to Experience	.036	1.091	.368	.036
Retailer Preference	.166	5.752	<b>.001</b>	.166
Psych. Distance	.147	5.004	<b>.001</b>	.147
Affinity* Distance	.002	.644	.666	.002
Affinity*Retailer Preference	.545	34.542	<b>.001</b>	.545
Retailer Preference*Distance	.217	8.022	<b>.001</b>	.217

Between-promotional effects (see Appendix 12) revealed that brand affinity accounted for a positive proportion of the variance in EUSDs for all promotions, other than the control. The effect was especially significant for drip pricing ( $F(2,264) = 66.78, p < .001, \text{Eta}^2 = 0.309$ ) and value-based

pricing ( $F(2,264) = 45.17, p < .001, \text{Eta}^2 = 0.233$ ). Similarly, distance and store preferences played consistently significant roles in EUSDs for all practices. The former significantly predicted value-based purchase intentions ( $F(2,264) = 23.71, p < .001, \text{Eta}^2 = 0.137$ ), the latter BOGDIF intentions ( $F(2,264) = 10.11, p < .001, \text{Eta}^2 = .145$ ). The interaction between affinity and retailer preference appeared to have a negative relationship with all promotional practices. This suggests that affinity for the favourite store condition increased the likelihood of, biased, unsatisfactory decisions.

In conclusion, drip pricing had the most significant overall effect in increasing the likelihood of biased purchase intentions. To ascertain significant between-condition effects, post hoc Bonferroni-corrected contrasts (Table 32) revealed that the favourite store condition was associated with EUSDs for all promotional practices (Figure 12). Moreover, increases in distance led to similarly biased choices. There was no significant effect of either condition on the choice of non-promoted control items.

**Table 32.**

Bonferroni-corrected contrasts between-promotional EUSDs and experimental conditions.

		Drip Pricing	BOGDIF	Bundling	Value-Based Pricing	Control
Retailer Preference (Favourite vs Least Favourite)	K	.852	1.029	.987	.937	.013
	Sig.	<b>.001</b>	<b>.001</b>	<b>.001</b>	<b>.001</b>	.864
Distance (Far vs. Near)	K	.324	.303	.336	.532	.029
	Sig.	<b>.002</b>	<b>.011</b>	<b>.003</b>	<b>.001</b>	.566

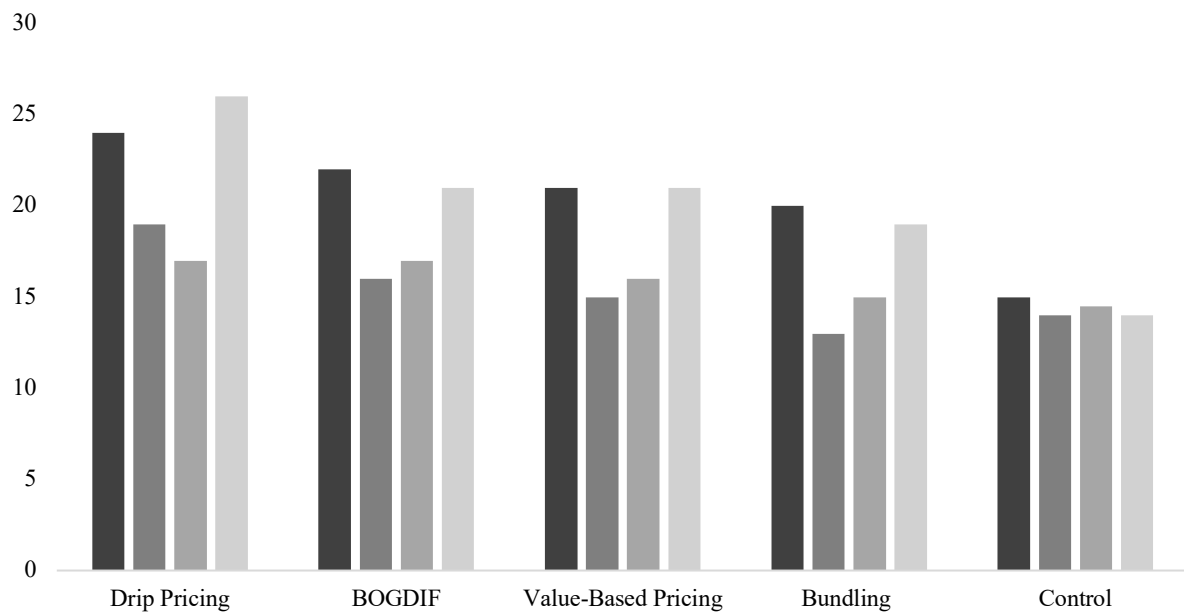


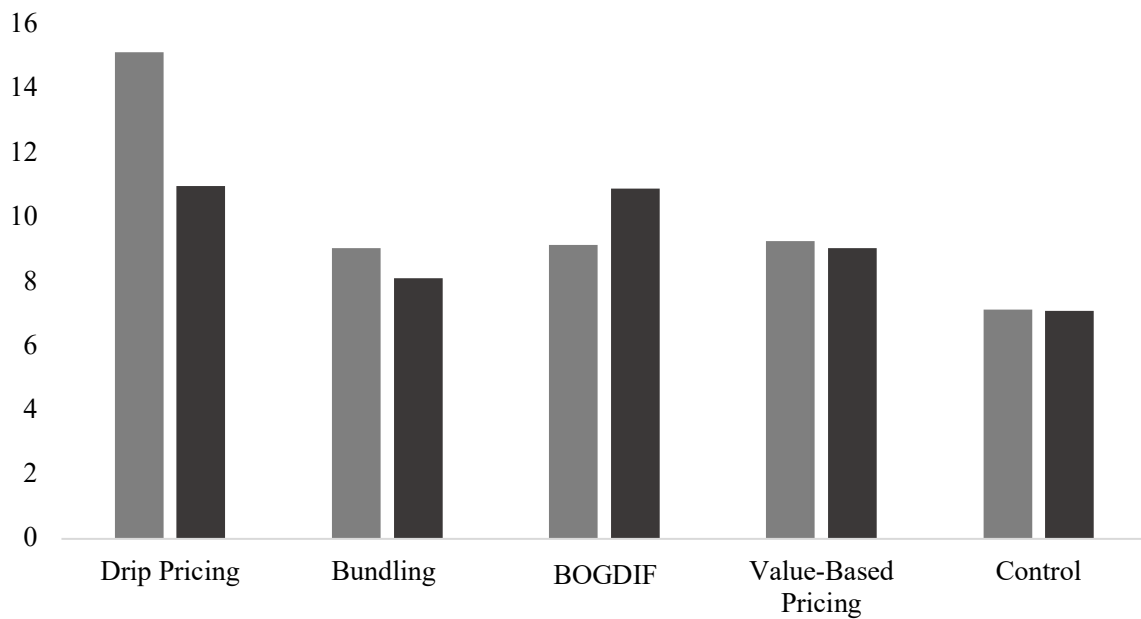
Figure 12. Histogram depicting EUSDs segmented by promotional practice, favourite retailer condition; ■ 'Favourite Store', ■ 'Least Favourite Store' and distance; ■ 'Quite Near', ■ 'Quite Far'.

Lastly, an inspection of the effect of price differences between promotions, pairwise *t*-tests (see Table 33) indicated that higher-priced items induced greater EUSDs (see Figure 13). Drip pricing exhibited the greatest purchase intentions as well as the greatest between price differences ( $M = 4.17$ ,  $t = 13.71$ ,  $p < .001$ ). Bundling items exhibited smaller between price differences ( $M = 0.23$ ,  $t = 2.96$ ,  $p < .005$ ), indicating that this practice induced similar purchase intentions despite price differences.

**Table 33.**

Paired sample *t*-tests of EUSDs as a function of promotional practices and price.

	MD	t	Sig.
Drip Product 1 vs Drip Product 2	4.17073	13.706	.001
Bundling Product 1 vs Bundling Product 2	0.9878	4.817	.001
BOGDIF Product 1 vs BOGDIF Product 2	-0.9512	-4.354	.001
Value-Based Product 1 vs Value-Based Product 2	0.23171	2.966	.003
Control Product 1 vs. Control Product 2	0.05463	0.161	.873



*Figure 13.* EUSD purchase intentions as a function of promotional practices and price: ■ Equal price, ■ High price.

## 5.7 Discussion

### 5.7.1 Evaluation of results

This investigation aimed to explore some of the psychological dimensions that influence consumer decision-making, specifically brand relationships and promotions. Three components of brand relationships—brand identification, loyalty, and switching costs—were significantly correlated, as hypothesised. Supporting the bi-directional relationship between these factor as is cited in the consumer literature (Bain and Moutinho, 2011; Godey, Pederzoli, Aiello, Donvito, Chan, Oh and Weitz, 2012), all three significantly loaded into the hypothesised single dimension. This dimension was labelled brand affinity. Although this newly established dimension is like the previously conceived dimension of brand love, it still lacks the due consideration of a number of other factors that brand relationships are comprised of. For instance, brand engagement, knowledge, and social involvement have all been demonstrated to be important in determining brand relationships and yet are factors that remain unconsidered (Brakus, Schmitt, and Zarantonello, 2009). While these factors are yet to be fully considered in the context of brand love, they were not considered at all by the brand affinity dimension presented here.

The effect of brand affinity in predicting EUSDs was nonetheless significant, however. Although brand affinity accounted for only a small proportion of the variance in EUSDs (34.8%),



11% of those who made ESDs decisions had comparably lower indices of brand affinity. Moreover, affinity had the most pronounced effect to decision utility when combined with the favourite retailer condition which would suggest that decisions are partly influenced by the retail environment. Overall, the results therefore seem to support prior research indicating that psychological relationships with brands negatively impact purchase decisions (Lam, Ahearne, Mullins, Hayati and Schillewaert, 2013; Lin and Sung, 2014; Tanford, Raab, and Kim, 2012). Hedonistic gratification from loyalty-based purchases may be one explanation of the found effects, where the pleasure associated with consuming products from psychologically affiliated retailers can decrease the importance of cost factors (Cavusgil and Kim, 2014; Mendez, Bendixen, Abratt, Yurova, and O’Leary, 2015). Such a modification of the choice architecture is not directly tested here, however.

Considering the other moderators of decisions, psychological distance was confirmed to significantly increase the likelihood of EUSDs - especially so in light of retailer preference. The literature supports these findings by suggesting that greater distance can promote cognitive load, i.e. the over effort being used in the working memory to evaluate information (Liberman *et al.*, 2007). When cognitive load occurs, some research suggests that conflict between choices can arise. This conflict, also known as cognitive dissonance, can promote the likelihood of impulsive decisions (Maglio, Trope, and Liberman, 2013). It could, therefore, be argued that this is especially likely in promotional scenarios where distance is high as consumers trust promotions and view them as offering savings (the heuristic); and that the costs associated with the distance are negligible in light of the perceivably guaranteed saving. This notion is further supported in that increases in distance have been linked to the making of biased decisions as a function of cognitive limitations (Kim, Zhang and Li, 2008; Maglio, Trope, and Liberman, 2013; Trope, Liberman and Wakslak, 2007).

Although the literature can explain the distance related findings, the theory of psychological distance typically proposes that consumers should pay more attention to their decisions after assuming greater distance-related costs (Goodman and Malkoc, 2012). Although this relationship is not confirmed here, there are two explanations of this result. First, the positive interaction between distance and retailer affection in predicting EUSDs may reflect a decision driven by personal gratification over economics (i.e., saving money). In the literature, it is often assumed that accepting greater costs for the sake of hedonistic gratification may prove necessary to obtaining personal utility, i.e. utility that fulfils personal goals rather than functional or physiological (Bell, Ho and Tang, 1998).

In this case, consumers may accept fallible prices given the greater consumption gratification from purchasing from their favourite retailer. Second, a further explanation may reside in the hindsight bias i.e., the inclination after an event has occurred to see the event as having been predictable, despite there having been little or no objective basis for predicting it. In practice, this bias may encourage consumers to rationalise their willingness to travel greater distances, thereby incurring more costs, by attempting to increase their basket value through the purchasing of promotions (Bell, Ho and Tang, 1998). The extent to which either are accurate explanations of this result would require further testing.

Price promotions were again found to have varying effects on decision outcomes. Among the various price-framing methods, drip pricing was confirmed as having a particularly acute effect in predicting EUSDs. This is consistent with expectations, as previous work has suggested that the cognitive complexity and financial literacy required to evaluate the utility of the promoted price are substantial (Ahmetoglu, Fried, Dawes and Furnham, 2010; Grewal, Ailawadi, Gauri, Hall, Kopalle and Robertson, 2011; Lusardi and Mitchell, 2007; Smith and Stewart, 2009). Bundling, which typically involves similarly complex calculations (Horvitz, 2013; Yandav, 1994), yielded significant results, yet relatively weaker than other practices. This was surprising since bundling is commonly associated with strong biasing effects. One explanation of this could be the salience and identical nature of products used in the bundle. In particular, some research suggests that when the constituent items in a bundle are identical, thus directly comparable, price fairness evaluations become exponentially easier. Should this be the case then the items within the bundle could be considered to mitigate bias (Beall, Carter, Carter, Germer, Hendrick, Jap and Petersen, 2003; Jap, 2002;).

BOGDIF and value-based pricing typically require fewer more rudimentary price evaluations. As such, these methods typically promote decision utility (Darke and Chun, 2005; Shampan'er and Ariely, 2006). Both BOGDIF and value-based pricing increased the extent of ESOPCs more than the control. The magnitude of effect for BOGDIF-promoted items was surprising, given the seemingly evident fact that the second item was not free. Previous research has indeed suggested that promotional stereotypes can warp price perceptions and mitigate the evaluation of prices (Karmarkar, Shiv, and Knutson, 2014). This may explain the significant BOGDIF effect and could highlight that the findings are the result of general promotion-related value perceptions (e.g. promotions always offer me value) as opposed to practice-specific or cognitively based reasons (e.g. it was easier to work out if I was getting a good deal).

Regarding the link between affinity and promotion-specific decision bias, affinity was a strong predictor of all promotion-based EUSDs. Previous literature supports these findings to some degree, suggesting that brand loyalty increases price sensitivity and deal-prone behaviour (Mela, Gupta, and Lehmann, 1997). As such, loyal consumers become bargain hunters with an insatiable desire to obtain value for their money. Research into deal-proneness confirms this tendency by suggesting that consumers who are price-sensitive, actively seek promotions, and desire hedonistic gratification from purchasing are particularly prone to accepting promotions (Bergkvist and Bech-Larsen, 2010). Although it has not been confirmed that people with these traits are also likely to accept fallibly priced promotions, this could be presumed. It is therefore reasonable to expect that strong brand relationships, in this case represented by brand affinity, could encourage deal prone behaviours with little regard for the actual extent of the discount.

Finally, contrary to expectations, higher-priced products exhibited greater purchase intentions than those which were priced in line with the average RRP. Although it could be argued that smaller prices invoke less 'sticker shock' (i.e., the shock experienced when the expected price is significantly different to the advertised price) and making the purchase more attractive, some findings suggest otherwise. For instance, Kalyanaram and Little (1994) showed that price increases of up to 20% could go unabated for more essential, non-luxury, goods. Some scholars suggested that price sensitivity and internalised reference prices may explain why higher prices are accepted even when 'sticker shock' could be high (e.g. Zhuang and Alford, 2015). According to this research, consumers have a range of internalised prices in their memory that are sorted upon experience or buying a product. This range, e.g. 80p - £1.20 for a loaf of bread defines a consumer's price sensitivity. Should the 80p loaf see a price rise of 20% to, say, £1 the item may still fall within the acceptable range of price, thereby being accepted. Since the more expensive promoted products were accepted as readily as those priced in line with the average RRP it is logical to see why the decisions regarding the more expensive price items were more biased.

## **5.8 Study Two**

### **5.8.1 Aims and Hypotheses**

The second study aimed to build upon the significant effects found in *study 1* by also exploring how a relationship between IRP malleability and brand affinity can optimise or degrade promotional decisions. The directionality between any affinity-IRP relationship shall also be considered, the

presumption being that IRP malleability has the potential to decrease brand affinity. Such a proposition stems from research suggesting that because those who are more susceptible to IRP malleability are more likely to internalise lower prices. This can create a positively skewed cost-value relationship for a brand (Kahneman and Tversky, 1979; Mandrik, Fern, and Bao, 2005; Nagle and Hogan; 2006). This is further supported in that low sticker shock retains brand relationships and thus loyalty (Patwardhan and Balasubramanian, 2011; Nunes, Bellin, Lee and Schunck, 2013).

However, there seems to be a cyclical element to the paradigm with research suggesting a positive association between brand relationships, product perceptions and trust in the retailer (Veloutsou, 2015). It could therefore be argued that, due to retailer trust, negligent price evaluations lead to higher prices being accepted and inadvertently internalised. Since this notion is largely unsupported the second study attempts to establish support for this theory. It is thus hypothesised that IRP malleability will increase brand affinity ( $H_1$ ) and that both shall negatively impact the utility of promotional decisions ( $H_2$ ). Moreover, it is predicted that there will be a significant promotional effect. As in this thesis's previous chapters', drip pricing being predicted to be the most bias invoking practice to purchase intentions ( $H_3$ ). No predictions regarding personality or demographics are made in light of previous non-significance.

## **5.9 Method**

### **5.9.1 Participants**

Employees from three SME's in conjunction with a random consumer sample provided a cohort of 384.  $N=98$  participants were removed due to incomplete responses, leaving a working sample of 286 (employees,  $n=142$ ; consumers,  $n=144$ ). Organisations contacted were not limited by size or sector, although participating employees in related financial positions were asked to abstain given their pre-supposed heightened financial literacy. The consumer sample was randomly sampled using the AMAZON Turk survey platform. Descriptive statistics revealed the sample to be of mixed gender (females 45%; males 55%), mid-aged ( $M = 34.6$ ,  $SD = 11.4$ ) and from the middle social class ( $M = 5.1$ ,  $SD = 1.5$ ). They were also educated to at least high school level ( $M = 3.9$ ,  $SD = 1.4$ ) and moderately experienced as consumers ( $M = 14.3$ ,  $SD=7.48$ ). Psychologically, they were on average agreeable ( $M = 5.4$ ,  $SD = 2.4$ ), open to experience ( $M = 6.3$ ,  $SD = 2.7$  and extroverted ( $M = 5.5$ ,  $SD = 2.5$ ), yet also neurotic ( $M = 5.5$ ,  $SD = 2.5$ ) conscientious ( $M = 6.1$ ,  $SD = 2.8$ ). Brand relationship indices revealed the sample to both moderately identify ( $M = 19.1$ ,  $SD = 6.2$ ) and be loyal ( $M = 23.8$ ,

SD = 7.1) to their favourite grocery retailer. When combined with unlikelihood to switch ( $M = 26.32$ ,  $SD = 7.55$ ) indicated generally high levels of brand affinity ( $M = 69.3$ ,  $SD = 17.8$ ).

### 5.9.2 Design/Materials

Using a longitudinal 2 x 2 experimental design (Price Exposure x Price Fairness), participants were distributed multifaceted questionnaires across two experimental phases. Using a random allocation function, the cohort was split between the non-exposure (control) ( $n=139$ ) and exposure ( $n=147$ ) conditions. Exposure referred to the exposure of experimentally manipulated prices (+5% to the RRP) which aimed at skewing the IRP. Participants were also split between the price fairness condition which determined if they engaged with either fair ( $n=122$ ) or unfair ( $n=164$ ) prices. Price fairness was relative to the market average RRP at the time of study. 'Fair' prices offered a 10% decrease to the average RRP while 'unfair' a 10% increase. Accepting unfair prices thus equated to a biased EUSD.

Personality was once again measured using a the ten-item personality index (TIPI - Gosling, Rentfrow and Swann, 2003), which can be considered useful in designs with complex and lengthy measurements (Muck, Hell and Gosling, 2007). Questions of brand identity (Aaker, Fournier and Brasel, 2004), loyalty (Sirdeshmukh, Singh and Sabol, 2002) and switching costs (Burnham, Frels and Mahajan, 2003) were again sourced and adapted as in study one. IRP's were measured as per in **Chapter 4**, with the addition of a five-question, seven-point scale of familiarity and experience with purchasing (Thompson, Hamilton and Rust, 2005). Also known as the consumer experience scale (see Appendix 5), previous research has attributed it high reliability ( $\alpha=.89$ , Thompson, 2008).

Two 5-page price flyers were created. The first used a combination of news articles and irrelevant promotions to mask the prices of the experimental important products and promotions. The prices presented were visible but not explicitly highlighted and were averages of the market (see Appendix 9 for an example). In contrast, the second flyer was used in conjunction with the exposure condition to present participants with manipulated prices based upon the price fairness condition. Table 34. highlights the promotions, items used and market averaged RRP's.

**Table 34.**

Summary of the promotional practices, constituent items and RRP's.

Promotion	Item	RRP(£)
BOGDIF	700ml white wine	£12.99
Drip Pricing	Small 18" TV (vat, shipping, card surcharge)	£109
Bundling	Two 4x Yoghurt Pack	£5.6
Value-Based Pricing	Nokia Lumia (RRP 80, Now £40)	£40
Control	Great deal get it now XL Nutella	£5.99

Finally, purchase intentions were measured on a 7 item, 6-point, scale that was adapted from Dodds, Monroe, and Grewal (1991) to provide a no choice option (see Appendix 13). The scale has been consistently attributed a high reliability of  $\alpha=.95$  (Grewal, Monroe and Krishnan, 1998; Hardesty, 2004) and is thus considered reliable.

### 5.9.3 Procedure

Beginning phase one participants provided demographic, personality and brand relationship information. All brand-related items were directed to the consumers 'preferred' retailer in the FMCG goods industry. Price evaluations (IRPs) for each promotion and their individual item/component(s) were then reported to record and benchmark price expectancies. The first promotional flyer, containing the real RRP's of both products and promotions, was then presented for up to 5 minutes. This ended the first phase.

One week later the cohort was randomly split into one of two exposure conditions. Those in the exposure condition were provided with a 24-hour window in which to interact with the promotional flyer containing manipulated prices (+5%). Once again, participants could study the information for up to 5 minutes after which they were subjected to an unrelated 3-minute, 15 question, numerical filler task.

In the final phase, taking place two weeks after the first, the cohort was divided into one of the price fairness conditions. Participants provided their IRPs for both the individual items and promotions, after which they watched an unrelated 2-minute filler video. Upon completion, participants entered a purchasing scenario - a large grocery store akin to TESCO Extra. Products and promotions involved in the purchase scenario were presented on the basis on the participant's respective price fairness condition. Purchase intentions were provided for each promoted item.

## 5.10 Results

The results were analysed using SPSS 13 and begun by considering the descriptive statistics surrounding the dependant variables of interest (see Table 35). Drip pricing invoked the greatest average IRP malleability ( $M = 11.7$ ,  $SD = 4.8$ ). Value-based ( $M = 10.2$ ,  $SD = 3.7$ ), and bundling ( $M = 8.6$ ,  $SD = 3.3$ ) practices exhibited similarly high IRP malleability. All three, combined with BOGDIF ( $M = 6.1$ ,  $SD = 1.6$ ), caused greater IRP malleability than the control ( $M = 4.2$ ,  $SD = 1.1$ ).

Furthermore, purchase intentions showed bundling ( $M = 20.7$ ,  $SD = 7.6$ ) and value-based ( $M = 19.2$ ,  $SD = 6.8$ ) promoted items to be the most attractive. BOGDIF ( $M = 14.7$ ,  $SD = 3.8$ ) and no promotion ( $M = 14.5$ ,  $SD = 7.7$ ) were the least attractive. While it was expected that bundling would equate to high purchase intentions, typically getting an item ‘free’ should typically equate to similarly high intentions.

**Table 35.**  
Descriptive statistics for IRP malleability and purchase intentions.

	M	SD
Drip Pricing IRP (% Change)	11.77	4.83
Value-Based Pricing IRP (% Change)	10.02	3.71
Bundling Pricing IRP (% Change)	8.63	3.25
BOGDIF IRP (% Change)	6.08	1.57
Control IRP (% Change)	4.15	1.13
Total IRP Malleability	40.64	11.50
Drip Pricing Purchase Intentions	17.05	6.80
Value-Based Purchase Intentions	19.24	6.79
Bundling Purchase Intentions	20.70	7.57
BOGDIF Purchase Intentions	14.71	3.76
Control Purchase Intentions	14.54	7.67

To once again assess the validity of a brand affinity dimension a series of confirmatory factor analyses were conducted. Using principal axis factoring and direct-oblimin rotations the items from the brand identification, loyalty and switching scale loaded significantly into one-dimension accounting for 68% of the variance (see Table 36). As per *study 1* this was labelled brand affinity, with each scale being statistically reliable.

**Table 36.**  
Summary of factor analyses and reliability statistics for the labelled dimensions.

Scale/Dimension	Items Entered	Reliability (a)	Variance of Factor
Purchase Intent	7	.78	74%
Identity	6	.85	85%
Loyalty	7	.83	81%
Switching	6	.79	78and
Affinity	19	.69	68%

A linear regression was employed to test for the significant effect of IRP malleability (Table 37) for each promotional practice on brand affinity. A significant regression equation was found ( $F(15,271) = 8.64, p < .001$ ) with IRP malleability of drip pricing ( $B = .35, t = 2.89, p < .005$ ), value-based pricing ( $B = .926, t = 2.21, p < .03$ ) and bundling ( $B = .786, t = 2.00, p < .05$ ) explaining the statistical variance. Given these findings it can be can, therefore, be suggested that a participant's affinity increased by 1.31 units for each 1 % of drip pricing IRP malleability. Neither demographics nor personality traits had a significant effect, despite previous associations (see **Chapter 2**). Consumer experience was not found to interact with IRP malleability in predicting brand affinity significantly.

**Table 37.**  
Linear regression between demographics, personality and IRP malleability to brand affinity.

	<i>Unstandardised Coefficients</i>		<i>Standardised Coefficients</i>		
	B	Std. Error	Beta	t	Sig.
(Constant)	54.236	9.839		5.51	<b>.001</b>
Gender	0.131	1.26	0.006	0.10	.917
Age	-0.165	0.106	-0.105	-1.55	.123
Education Level	-0.285	0.889	-0.022	-0.32	.749
Social Class	-0.679	0.835	-0.055	-0.81	.418
Extraversion	-0.569	0.381	-0.091	-1.50	.137
Agreeableness	0.389	0.464	0.052	0.84	.403
Neuroticism	-0.813	0.445	-0.116	-1.83	.07
Conscientiousness	0.514	0.39	0.08	1.32	.19
Openness to Experience	-0.139	0.397	-0.021	-0.35	.726
Consumerism Experience	-0.042	0.159	-0.018	-0.26	.793
Drip Pricing IRP (% Change)	1.307	0.452	0.35	2.89	<b>.004</b>
Value-Based Pricing IRP (% Change)	0.926	0.538	0.293	2.21	<b>.026</b>
Bundling Pricing IRP (% Change)	0.786	0.6	0.242	2.00	<b>.046</b>
BOGDIF IRP (% Change)	-0.378	0.689	-0.033	-0.55	.583
Control IRP (% Change)	0.037	0.937	0.002	0.04	.969

In further exploration of the IRP malleability – brand affinity relationship it seemed that the relationship was positive even when split by exposure to the manipulated IRPs (see Figure 14). Together, the linearity indices revealed that affinity and IRP malleability were positively related in the exposure ( $R^2 = .39, p < .001$ ) and non-exposure conditions ( $R^2 = .33, p < .001$ ). The effect in the former suggests that brand affinity increased as a function of IRP malleability that was derived from manipulated price exposure.



Concerning how promotional practices influenced purchase intentions; pairwise t-tests (see Table 38) indicated significantly different purchase intentions across all practices. For instance, purchase intentions for drip pricing were significantly higher than for value-based pricing ( $M = -2.2$ ,  $t(1,284) = -6.74$ ,  $p < .001$ ). It seemed evident that intentions for all promotional practices exceeded the control. However, the effects of decision utility and exposure were not accounted for.

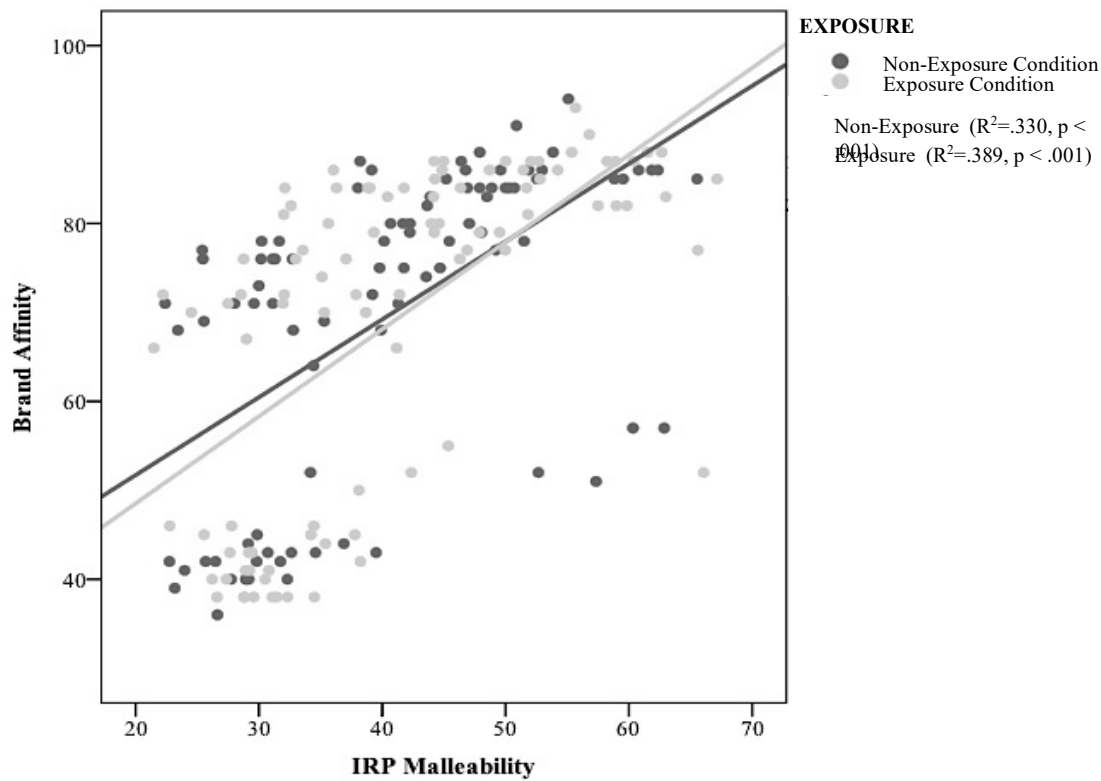


Figure 14. Scatter plot with  $R^2$  linearity function depicting the relationship between total IRP malleability (%) and brand affinity (%) as a function of the exposure condition.

**Table 38.**

Paired samples t-tests between promotional practice purchase intentions.

	r	Sig.	M	SD	t	Sig.
Drip Pricing - Value-Based Pricing	0.79	.001	-2.20	4.42	-6.74	.001
Drip Pricing - Bundling	0.78	.001	-3.65	4.83	-10.25	.001
Drip Pricing - BOGDIF	0.14	.057	2.34	7.29	4.35	.001
Drip Pricing - Control	0.16	.027	5.82	7.58	10.41	.001
Value-Based Pricing - Bundling	0.75	.001	-1.46	5.16	-3.83	.001
Value-Based Pricing - BOGDIF	0.13	.07	4.53	7.31	8.41	.001
Value-Based Pricing - Control	0.21	.004	8.01	7.38	14.73	.001
Bundling - BOGDIF	0.18	.016	5.99	7.83	10.38	.001
Bundling - Control	0.23	.002	9.47	7.93	16.19	.001
BOGDIF - Control	0.06	.416	3.48	5.79	8.15	.001

A series of ANOVAs were conducted to test for significant differences among promotional purchase intentions as a function of both exposure and price fairness. Figure 15., depicts purchase intentions as a function of all four conditions, indicating that for those in the fair price condition intentions were greatest. Significant differences in purchase intentions were indicated between price fairness conditions for drip pricing ( $F(1,285) = 18.2, p < .001$ ), value-based pricing ( $F(1,285) = 10.4, p < .001$ ) and bundling ( $F(1,285) = 18.9, p < .001$ ). Differences between exposure conditions seemed minimal, with the only significant effect being found for the control condition ( $F(1,285) = 12.2, p < .001$ ).

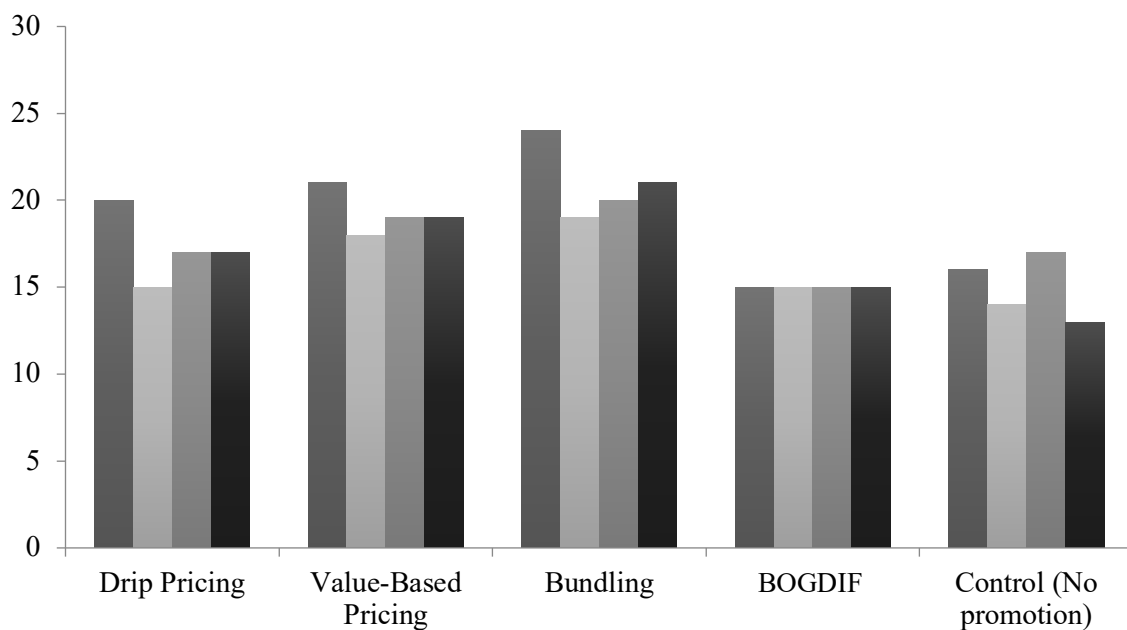


Figure 15. Histogram depicting purchase intentions as a function of price fairness (■ fair ■ unfair) and exposure (■ exposure; ■ no exposure)

Given the differences in purchase intentions across promotional practices, a series of MANCOVAs were conducted to compare and assess the dimensions of influence in predicting biased vs. utilitarian choice (Table 39). A statistically significant MANCOVA effect was obtained for consumer experience ( $F(5,117) = 2.48, p < .05, \text{Eta}^2 = .199$ ) and exposure ( $F(5,117) = 4.46, p < .002, \text{Eta}^2 = .308$ ) in predicting decision utility. No significant effect was found for any personality or demographic items, nor affinity or IRP malleability facets. Contrastingly, a significant MANCOVA effect was found for extraversion ( $F(5,159) = 2.41, p < .05, \text{Eta}^2 = .113$ ), IRP malleability ( $F(5,159) = 3.94, p < .005, \text{Eta}^2 = .172$ ) and brand affinity ( $F(5,159) = 2.54, p < .05, \text{Eta}^2 = .118$ ) in predicting biased purchase intentions. Moreover, the interaction between IPR and affinity, which predicted

biased purchase intentions the most ( $F(5,159) = 12.39, p < .001, \text{Eta}^2 = .395$ ), further supports the relationship between the two dimensions and their effect on decisions.

**Table 39.**

MANCOVA depicting the significance of predictor variables in their effect toward the canonical variable of purchase intentions, a combination of promotionally attributed choices.

Effect	<i>'Fair' Price Condition</i>			<i>'Unfair' Price Condition</i>		
	Pillai's Trace Value / $\text{Eta}^2$	F	Sig.	Pillai's Trace Value	F	Sig.
Intercept	.448	8.122	<b>.001</b>	.340	9.774	<b>.001</b>
Gender	.136	1.569	.186	.032	0.635	.673
Age	.118	1.339	.263	.064	1.294	.273
Education Level	.069	0.745	.593	.083	1.728	.136
Social Class	.064	0.682	.639	.069	1.407	.229
Extraversion	.105	1.178	.333	.113	2.409	<b>.042</b>
Agreeableness	.044	0.465	.800	.021	0.399	.848
Neuroticism	.048	0.506	.770	.042	0.828	.533
Conscientiousness	.064	0.682	.639	.059	1.19	.320
Openness to Experience	.098	1.084	.381	.023	0.457	.807
Consumer Experience	.199	2.481	<b>.044</b>	.090	1.881	.105
IRP Malleability	.190	2.351	.054	.172	3.937	<b>.003</b>
Brand Affinity	.096	1.057	.395	.118	2.542	<b>.033</b>
IRP Mal/Affinity Interaction	.084	0.918	.477	.395	12.388	<b>.001</b>
Exposure	.083	0.926	.452	.207	4.947	<b>.001</b>

Between subjects' effects for both MANCOVAs (see Appendix 14) confirmed that brand affinity, IRP malleability and their interaction were significant in predicting biased intentions only for drip, value-based and bundling practices. Moreover, the significance of each seemed to vary among practices. Specifically, relationships were strongest between IRP malleability and drip pricing ( $F(1,285) = 14.46, p < .001$ ), affinity and bundling ( $F(1,285) = 9.55, p < .005$ ) and drip pricing with the IRP-Affinity interaction ( $F(1,285) = 47.27, p < .001$ ). The exposure effect was strongest in predicting biased purchase intentions for bundled items ( $F(1,285) = 17.90, p < .001$ ). Taken together, it could be concluded that biased choice was primarily driven by affinity and IRP malleability when items were either drip priced or bundled.

## 5.11 Discussion

### 5.11.1 Evaluation of results

This investigation aimed to ascertain if IRP malleability could influence the effect of brand affinity on decision utility. Moreover, the study once again attempted to ascertain the validity of the brand affinity dimension and assess how brand affinity influences decision outcomes. By enlarge the hypotheses made were confirmed and the findings in study one replicated. In a testament to this, the single construct labelled brand affinity was once again created and validated - identification, loyalty and switching costs explaining 68% of the dimension's variance. The interaction between this combination of traits supports the literature that has found a significant correlation between the three and that they could be considered the most integral elements defining brand relationships (Batra, Ahuvia and Bagozzi, 2012; Brakus, Schmitt and Zarantonello, 2009).

Second, IRP malleability was found to influence decision utility not only directly but through an interaction with brand affinity. This finding supports the findings in **Chapter 4** adds validity to the insipidly suggested relationship between the two factors and their effect on decision outcomes (Mandrik, Fern, and Bao, 2005; Nagle and Hogan; 2006). For instance, the pricing literature research suggests that because IRP's acting as benchmarks of quality and price fairness (Mazumdar, Raj and Sinha, 2005), they can influence the cost-value associations that foster brand loyalty (Nunes, Bellin, Lee and Schunck, 2013; Patwardhan and Balasubramanian, 2011). This may be especially the case for those who are 'deal prone' given the increased hedonism with which deal prone shoppers consume promoted products. As a result, some consumers may internalise false prices that can skew brand relationships. If these skewed brand perceptions are strengthened, it is possible that consumers begin to identify with a brand and its constituent consumer group (Veloutsou, 2015). Through such loyalty behaviours it has been suggested that the likelihood of decision bias may increase (Han, Lerner and Keltner, 2007). The findings presented here therefore provide support for this research.

Significant differences in purchase intentions were once again found between promotional practices, with each practice once again having its own unique effect on decision utility. However, counter to *study 1* drip pricing was not the most bias invoking. In this instance, bundled items yielded the greatest biased purchase intentions, value-based and drip pricing following suit. One explanation of this bias may a link between bundling and brand affinity. Because past research suggests that bundling's effectiveness is primarily driven by a trust in the bundle's value offering (Stremersch and

Tellis, 2002), it could be that the trust in the bundle, coupled with other affinity components e.g. loyalty, leaves consumers particularly open to bias (Veloutsou, 2015). This is perhaps the most apt explanation for the findings; especially as research shows consumer to distrust the drip pricing process and fairness of the componentry prices more so than for bundling or value-based pricing.

Furthermore, the bias associated with drip priced purchase intentions was indicated to be primarily driven by IRP malleability. This finding was sound given that the practice's efficiency in driving sales is usually down to a consumer's inability to calculate, evaluate and adjust multiple prices (Lee and Han, 2002). If consumers were especially prone to IRP manipulation, there is a rationale that there would be an increase in the likelihood of making biased decisions (Alford, and Biswas, 2002). Despite trust seeming to be an important explanation for these results, the findings do not extend to BOGDIF, a practice for which consumers have immense trust in the reward. However, it is worth noting that although purchase intentions for BOGDIF were the lowest, they were identical to those made for BOGDIF items in the optimal pricing condition. Consequentially, this could equally be argued that BOGDIF was the most biasing invoking practice given that intentions did not differ when the price was discounted.

Departing from decision utility, the exposure to manipulated prices seemed to be non-significant in determining purchase intentions for promotions. However, this was not the case when considering exposure as a function of how fair the price was. In fact, price exposure interacted with unfair, or inflated, prices to bias choice. Therefore, the research suggests that even small attended exposure to manipulated prices or promotions can skew IRP's which can lead to bias if reinforced (Lowe and Alpert, 2010). Combined with the found biasing effects of brand affinity the significance of the IRP-Affinity interaction seems logical (Coleman, de Chernatony and Christodoulides, 2015; Strizhakova, Coulter and Price, 2011). Together then, it seems validated that both IRP malleability and affinity have the potential to impact decision in a negative way.

## 5.12 General Discussion

### 5.12.1 Summary and evaluation of findings

Two investigations aimed at ascertaining the validity of a brand affinity dimension and its effect on consumer choice. It was predicted that brand affinity would have a prominent effect on the utility of promotional choices. Taken together, the findings strongly validated the presence of a single dimension comprising of brand loyalty, identity and the switching costs. Having been well associated in previous research (Bloxham, 1998), this combination of affection facets would seem to equate to a type of brand affinity. However, with the three factors explaining a significant, but moderate, 68-76% of the variance, it seems logical to assume that other, more engagement-oriented dimensions need consideration as a part of this idiom. Brand engagement, knowledge and social involvement, for example, have been documented in the literature as additionally important factors in driving loyalty attitudes (Batra, Ahuvia, and Bagozzi, 2012; Brakus, Schmitt, and Zarantonello, 2009). Nevertheless, the general significance of the dimension warranted its use.

Regarding decision utility and bias, the first investigation suggested that 89% of participants actively chose to engage in purchasing that did not fulfil their primary purchase objectives. With the second investigation validating this percentage, it seems that even simple calculations or actions to promote utility were foregone in favour of purchasing promoted items at convenience. Of the variables used in the study brand affinity was consistently shown to be the strongest predictor of biased purchase intentions. The notion that brand relationships negatively impact decisions is supported by plethora of research. For instance, Batra *et al.*, (2012) suggests that the gratification from loyalty affiliated purchasing trumps the importance of other factors in a decision e.g. price fairness. Moreover, because brand relationships mean that consumers trust the retailer they therefore also trust the products and prices presented, ergo because of this trust consumers may accept higher prices blindly. In sum, brand relationships are commonly cited as biasing choice in the consumer literature (Cavusgil and Kim, 2014; Mendez, Bendixen, Abratt, Yurova, and O'Leary, 2015). Considering these findings, the found relationships could be considered questionable. Since brand affinity was only a significant predictor of biased purchase intentions, not utilitarian ones, there is strong support for the previous literary findings.

Although brand affinity was the primary dimension of interest, the significance of a variety of other psychological effects was found. For instance, psychological distance significantly increased the

likelihood of biased choice both alone and as a function of store favouritism. Moreover, the interaction between affinity and IRP malleability was found to be the most reliable predictor of biased choice in *study 2*. Apart from the impact on decision utility, the interaction between these two variables highlights a strong relationship between the cognitive aspects of consumer choice (e.g., information processing and price evaluation) and the more emotive, attitudinal, factors (e.g., brand relationships). Since both dimensions are found to be significant in promoting both promotional and decision-making effectiveness (Ahmetoglu, Furnham and Fagan, 2014) that fact that both degrade decision utility is unsurprising.

From a practice-specific perspective, the findings were mixed. In *study 1*, it was reconfirmed that drip pricing was the most bias invoking practice, while in the second bundling. The between-subjects effects revealed that the differences between promotions were due to the varying effects of exposure, affinity and IRP malleability. For instance, affinity and exposure significantly predicted bundling. This is a sound rationale given that bundling's effectiveness is especially built on trust that a discount is being provided (Chandon *et al.*, 2000; DelVecchio, 2005; Laroche *et al.*, 2003). However, the extent to which each practice has a biasing effect depends on the contextually dependant definition of bias. In this study it was defined as being the most economically sound i.e. offer the most value for money (VFM). Any intention to purchase an item where the price is not offering VFM reflects biased decision-making. In light of this definition, further consideration will need to be given the results of investigation two where BOGDIF intentions were indifferent between the optimality conditions. This finding could simply be an experimental bias, whereby the small between subjects' condition simply rendered a non-significant result. Further research will therefore be needed in this regard. Since both investigations point to promotions increasing the likelihood of biased choice in comparison to the control, the biasing effect of promotional practices on decisions continues to be supported.

Concerning demographic and personality traits, the relationships were once again mixed and inconsistent. Only in *study 1* were any such traits significant in predicting biased purchase intentions - namely gender and extraversion. However, effect sizes were small and were likely due to the small between-conditions sample sizes. This is a factor that has consistently influenced previous typological research (Lysonski and Durvasula, 2013). Interestingly the literature does point to demographics playing a moderate role in affinity type behaviours. For instance, loyalty has been linked to

agreeableness and conscientiousness, while switching with extraversion (Lin, 2010). Despite these relationships being indicated in the literature (Bove and Mitzifiris, 2007) no such relationships were indicated here.

### **5.12.2 Methodological limitations and future research**

Whereas in the present investigation an economically good or satisfactory choice is clearly defined as a function of monetary value, future research should consider the importance of decision drivers that align with brand affinity, e.g. the personal gratification gained from engaging in loyal behaviours. For instance, although the choice to buy something at, say, Tesco may be considered utilitarian for a loyal consumer, the price paid, which may potentially be greater, may impact the consumer's value and quality perceptions in the longer term. Interestingly, research considering this dynamic has suggested that a strong emotive association with a retailer can encourage binge purchasing (Dittmar, 2004). In the long-term consumers can view this binge behaviour as wasteful and distasteful despite the instantaneous gratification gained from loyalty-based purchasing (Cavusgil and Kim, 2014).

Cognitive dissonance can subsequently develop as loyalty-based gratification comes into conflict with price and cost concerns which can lead to further post-purchase dissatisfaction. Loureiro (2011) therefore noted that the longevity and stability of brand relationships are acutely tied to price consistency and expectations - high loyalty actively increasing the expectation of fair or lower prices. Future research is needed to explore these patterns in depth although they raise an interesting question as to how utility should be defined for promotions. While price is typically thought of as the driving force for all promotional methods, consumers who gain more satisfaction from loyalty-based purchasing over cost make utilitarian decisions only when this objective is fulfilled. Considering the importance of decision drivers like this will inevitably help the literature to understand how these findings apply to contexts where price is perhaps less, e.g. for very cheap goods and affluent consumers.

Although the findings confirmed the present hypotheses, a variety of methodological issues highlight the need for future research. Specifically, the sample, demographics, and terminology used in defining brand affinity warrant further consideration. The present cohort consisted of a mixture of working adults from a specific sector (service industry) and geography (London). Given the highly specific nature of these two groups potentially a distinctive subset of consumers, and the four



conditions subdivided the sample into even smaller cohorts. The problem of sample size arose particularly in consideration of those who made utilitarian as opposed to biased choices in *Study 1*. Due to the surprisingly small number (just 20 out of 286) of participants actively choosing to make utilitarian decisions, no direct comparisons between the factors driving utilitarian vs. biased choice could be made in *study 1*. Recruiting a more diverse sample, with a larger cohort of younger consumers, not only would strengthen the findings but also could gain information about the practices of those more likely to use online purchasing methods (Sorce, Perotti, and Widrick, 2005).

Despite business employees constitute a good sample, the regularity with which they shop, the methods they use, and their level of susceptibility to marketing tactics may make them unlike other consumer groups. Future work should thus look at the potential differences between consumer types with respect to the utility of their choices. Also, more accurate definitions and a broader consideration of the dimensions used may aid in promoting validity and uncovering other potentially influential factors. For instance, a broader consideration of the concept of brand affinity in the purchasing domain would undoubtedly aid in ascertaining how its underlying facets differ at the product, brand, and organisational levels. The strong correlations between the brand relationship items comprising of affinity illustrate this point and should thus be considered a priority if we are to understand behavioural pricing in depth.

Apart from these limitations, attempting to collect more quantitative data on loyalty, rather than just self-reported measures, would inevitably help to discern the extent of these relationships. In fact, the prominence of the effects found here calls into question the experimental design and the extent to which affinity was accurately ascribed to the experimental conditions. Incorporating methodological elements from power research, in which participants frame their mindset through a detailed account of past experiences, may have been more suitable in this instance. Asking participants to discuss their retailer in more detail, rather than to think about their retailer, can lead to more accurate representations of behaviour, attitudes, and beliefs (Hagan and Smail, 1997). Research focusing on this particular topic in more detail, perhaps outside the field of promotions, could be useful in this regard.

### 5.12.3 Implications and Applications

From an application perspective, the present findings strongly support the existing literature in the IRP, brand loyalty, and promotional domains. Validating some of the more exploratory findings, particularly concerning promotions, an active link between-promotional effectiveness and behavioural dimensions has been made. This fulfils the recommendations by a previous study (Ahmetoglu, Furnham, and Fagan, 2014) and supports two theories. First, the theory that promotions can negatively impact decision utility is supported. Moreover, the results imply that to understand the impact of promotions on decisions fully, we must seek to understand how brand relationships influence these decisions. This leads into the second supported theory which is that brand relationships can significantly enhance bias. Based on the findings it was highlighted that if retailers can encourage both loyalty and identity, consumers are far more pliable to accepting price increases and value adverse promotions (Baye, Morgan and Scholten, 2004). Despite supporting the research suggesting that emotive retailer associations can encourage ‘binge’ purchasing (Flight and Sacramento, 2015), others note that any post-purchase evaluations deemed to be deceptive and unsatisfactory can greatly impress on the affinity-based relationship (Duffy, 2003). Scholars thus note that the longevity of brand affinity is astutely tied to price consistency and expectations, with non-loyal customers being less accepting of price fluctuations (Kalyanaram and Little, 1994). Ironically, price expectations and consistency are commonly skewed by promotions (DeLVecchio, Krishnan and Smith, 2007), which create even greater conflict when items return to their RRP.

Taken together, both the current and previous findings indicate a note of caution for consumers and retailers. Regarding the former it becomes clear that emotive-based decisions can bias choice, consumers thus encouraged to fully evaluate a product’s price fairness and value proposition. Concerning the latter, it seems that retailers can greatly benefit from loyalty-associated purchasing but do have to be conscious of the consistency of the value provided. Offering loyalty points for instance may be useful in retaining loyalty, but without direct examples of how these can be used and what savings can be obtained are just ambiguous axioms (Wansink and Seed, 2001). Alternatively, offering coupons such as £5 off the next shop may thus prove more useful given the saliency and distinguishability of value (Antil, 1985; Nies and Natter, 2010), the seemingly low redemption rates being additionally advantageous. Combined with fostering social groups for various consumer typologies, retailers can tactfully increase loyalty and identity that leads to further bias (Bergkvist and Bech-Larsen, 2010; Carroll and Ahuvia, 2006). However, making sure both are retained through

consistent, measurable value, be it monetary or otherwise, will prove more cumbersome, any instances of dissatisfaction or deception increasing the care with which consumers make purchase decisions. Considerable further work will be needed to ascertain how promotional practices might feed into these strategies.

#### **5.12.4 Conclusions**

Taken together, the relationships between IRP malleability and brand affinity are supported. Moreover, the individual effect of both and their interaction was shown to negatively impact decision utility. The literature supports this idiom in that IRP malleability is a function of cognitive thinking styles and heuristical tendencies, all of which act as value directives for the decision. If skewed IRPs can inflate value perceptions of a brand, thereby fostering loyalty and encouraging brand identification (Nunes, Bellin, Lee and Schunck, 2013; Patwardhan and Balasubramanian, 2011), the findings show that decision bias is particularly likely. One explanation of this seems to be the hedonistic value derived from emotive, loyalty-based, purchasing, which can vitiate the importance of price and potential for obtaining utility. Finally, of the promotional practices, drip pricing and bundling were found to invoke the greatest biased purchase intentions. This aligns with the previous chapters. Considerable further research is needed to validate not only the found decision effects but also the factors that could make up brand affinity.



# CHAPTER 6 – MODEL TESTING IN A VIRTUAL SUPERMARKET

## 6.1 Chapter Overview

The predominant aim of this chapter is to create and test a model of decision utility in the context of the ‘big four’<sup>3</sup> promotions. Considering the research gaps presented in **Chapters 1 and 2**, combined with the findings from **Chapters 3-5**, the model's validity will be tested. Apart from validating many of the causal relationships hypothesised thus far, testing the relationships together and in a more ecologically valid setting will serve three purposes. Firstly, it will attempt to revalidate the findings presented earlier in this thesis, thereby adding support to the conclusions presented in the next chapter. Secondly, it will unilaterally consider how the dimensions previously identified as being involved in a promotion may predict decision utility. By considering the dimensions (e.g. need for cognition, IRP malleability, personality) together, the true extent of the direct and moderating effects of each dimension on the decision outcomes for each practice will be highlighted. From this, we can begin to understand which psychological traits or behaviours interact to impact on decision utility and further validate the cogno-affective theory (Laroche *et al.*, 2003). The hope is that these findings will help to empower consumers in the future by making them aware of their own biases in different promotional situations. Finally, by conducting this investigation using an innovative and experimental methodology, it is hoped that the findings will advance current knowledge and open up extensive research avenues for scholars passionate about consumer psychology.

This chapter begins by reconsidering the importance of the psychological and behavioural dimensions presented in **Chapter 2**. Importantly, it assesses the validity of the hypothesised dimensions in light of the findings presented in **Chapters 3-5**. Based on these findings and supporting evidence from current literature, a hypothetical model of decision utility in promotional contexts is created. This aims to establish the validity of the dimensions and also examine how each promotional practice differentiates between any effects on decision utility. Using a rigorous experimental approach, the methodology used in testing the model will combine a survey with a virtual supermarket, in which consumers can actively engage with products, brands, prices and promotions and make purchases. Based on each participant's unique definition and weighting of common grocery purchase drivers, a formula is used to compute the participant's decision utility. The utility percentage

---

<sup>3</sup> Big Four – Bundling, BOGDIF, Value-Based Pricing and Drip Pricing

is a calculation comparing the relative utility of choices made within the virtual environment against the factors cited as relevant to the decision. Using structural equation modelling (SEM), the relationships indicated in the previous chapters are then modelled to predict the utility score as a function of each promotional practice. Thus, this experiment should indicate which of the practices, behaviours and traits have the most significant impact on decision utility in the real retail environment.

## **6.2 Introduction**

### **6.2.1 The Importance of Demographics and Personality**

As previously highlighted, the literature on consumer decision-making has demonstrated the positive influence of demographics, personality, cognitive styles and consumer behaviours in moderating decision-making abilities (*see Chapter 2*). Research in the promotional field has also noted the significance of these relationships to decision-making (Cialdini, Reno and Kallgren, 1990; McGraw and Tetlock, 2005; Sinah, 1994). For instance, scholars have consistently found that demographics and personality traits predict promotional purchasing (Pacini and Epstein, 1999). Women are thought to have altruistic predispositions that influence their decisions (buying for the family), while men tend to be more hedonistic (buying for themselves) (Gilligan, 1982; Markus and Kitayama, 1991; Oyserman *et al.*, 2012; Oyserman 2009). Age, social class and personality appear to be equally important, with digital promotions leading to more interaction, engagement and purchasing among younger consumers (Sorice, Perotti and Widrick, 2005). Furthermore, greater disposable income available to consumers from higher social classes translates into the factors important in their decisions, such as quality for price. Among the personality traits, conscientiousness equates to cognitively engaging with products and their prices, aiding in decision utility (Dewberry *et al.*, 2013). In contrast, neuroticism encourages the consumer to over-think their choices, promoting cognitive load and thus bias.

Interestingly, while personality is considered hereditary and often a precursor for demographic traits, (Bain and Moutinho, 2011; Godey *et al.*, 2012), the relationship between the two can be considered bi-directional. Typically, there is a rationale that personality traits can predict academic prowess and income (Chamorro-Premuzic and Furnham, 2003; Sutin *et al.*, 2009). For instance, extraversion and conscientiousness help to determine education level obtained, which in turn influences future occupation and salary. However, while it is argued that the hereditary composition

of a person cannot inherently change, the outcome behaviour of certain traits can be exaggerated by demography. Significant life-changing events, such as suffering from a stroke, can significantly impact extraversion, with many people becoming introverted during the recovery phase (Morris, Robinson and Samuels, 1993). This bi-directionality can also be applied to consumer and purchasing contexts. For example, 'deal proneness' is considered a personality trait by the literature, but is an attribute that can become significantly more pronounced with higher disposable income (Schindler, Lala and Corcoran, 2014). Furthermore, age, social class, urbanisation and self-belief all appear to influence how 'deal proneness' is outwardly expressed (Bawa and Shoemaker, 1987a, 1987b, 1989; DelVecchio, 2005).

Since demographics and personality are consistently reported to be essential to purchasing decisions (Schindler *et al.*, 2014), the inclusion of these factors in the hypothesised model is validated. However, many findings concerning the behavioural implications of personality have been disputed. This is due to small sample and effect sizes (Ranjbarian and Kia, 2010) which mean that few firm conclusions can be drawn regarding the specific effects of psychographics on promotional purchasing. **Chapter 5** of this thesis supports this by reporting inconsistent and small effects of both personality and demography on decision-making. While the majority of inconsistencies concerned the prediction of decision-utility, some effects were also noted with regard to IRP malleability, brand affinity and information processing. For instance, age, agreeableness and neuroticism predicted IRP malleability (*see Chapter 4, study 1*, pg 155), while extraversion increased biased decisions in the context of brand affinity (*see Chapter 5, study 2*, pg 207). When processing styles were examined, the primary behaviour predicted by personality and demography (*see Chapter 2* page 81), several effects were found. Lower social class increased the prevalence of need for cognition, while more conscientious consumers with higher incomes reported greater financial literacy and intuition (*see Chapter 3*, pg 123).

### **6.2.2 The Importance Of FII, NFC And Decision Competence Factors**

Factors such as income, social class and personality have previously been shown to predict cognitive processing styles, although the findings are inconsistent (DelVecchio, 2005; Pacini and Epstein, 1999). For instance, a lack of consumer experience coupled with high conscientiousness can encourage a more profound cognitive processing style when faced with purchase information (Baumgartner, 2002; Mowen and Spears, 1999). However, both traits can also increase the use of

intuition, given that some consumers rely on past knowledge and success to guide their actions (Lambert, Bessière and N'Goala, 2012; Moxley, Ericsson, Charness and Krampe, 2012). Research in this field suggests that the use of cognition can be highly beneficial to decision-making (Glaser and Walther, 2013). For instance, cognitively engaging with prices helps the consumer to devote enough cognitive resources to evaluate the price's fairness properly. This helps strengthen the decision's utility. However, using too much cognition leads to cognitive load, which has consistently been found to increase decision bias (Lichtenstein *et al.*, 1990).

In contrast to earlier findings, newer research shows that using intuition can at times lead to more accurate decisions (Dijksterhuis *et al.*, 2006; Gigerenzer and Gaissmaier, 2011; Hutton and Klein, 1999). This is particularly true when consumers had previous experience of purchasing the target item and a good degree of financial literacy (Clark and d'Ambrosio, 2008; Fox, Bartholomae and Lee, 2005). The findings documented in this thesis support the theory that intuition is beneficial to decision utility (*see Chapter 3*, pg 134). More specifically, a high need for cognition (NFC) leads to biased purchase intentions, whereas faith in intuition (FII) predicts utilitarian choices. The results go on to confirm that intuitive decisions primarily offer decision utility when combined with good financial literacy and past purchase experience (*see Chapter 3*, pg 134). The combined importance of these traits in promoting decision accuracy and speed has also previously been reported (Frey, Mata and Hertwig, 2015). Therefore, it is expected that the best decision-makers utilise multiple traits, while those who are overly cognitive or intuitive, but lack experience, are prone to bias.

### **6.2.3 The importance of the price internalisation process**

According to the pricing literature, each processing style can influence the way that consumers internalise the price that they encounter. Consumers who rely on intuition when purchasing, without relevant experience or financial literacy, are thought to be increasingly susceptible to internalising unrepresentative, discounted prices. Internalised prices (IRPs) are consistently used in evaluating price 'fairness' and consequently the utility of a purchase (Lichtenstein *et al.*, 1990; Nagle and Hogan, 2006, p. 266). However, given that prices are ever fluctuating, IRPs are fluid, require updating and are thus malleable (Lowengart, 2002). IRP malleability can be due to a variety of factors, of which promotional frequency and length appear to be particularly important (Lowe and Alpert, 2010; Mazumdar, Raj and Sinha, 2005). However, if promotional prices are internalised, a return to the regular price after a lengthy promotion may be perceived as a price increase (Mela, Gupta and



Lehmann, 1997; Baye *et al.*, 2004). As such, IRP's can be considered an active component in predicting decision utility. To this end, two studies validated the effect of IRP malleability on utilitarian purchase intentions (*see Chapter 4*, pg 145). It was indicated that IRPs were particularly malleable when participants were exposed to manipulated prices. There also appeared to be a relationship with the duration of exposure. In both studies, IRP malleability had a significant impact on sub-optimal decisions as a function of drip pricing, bundling and value-based pricing (*see Chapter 4, study 1 and 2*).

In connection with dual processing models, IRPs' have also been shown to be malleable should a consumer fail to consciously attend to prices, their contexts and sources (Alba, Mela, Shimp and Urbany, 1999; Kalwani and Yim, 1992; Lalwani and Monroe, 2005; Neslin, 2002). However, although cognitive reasoning (NFC) is typically beneficial in helping to form accurate and contextually correct IRPs, it is also possible that too much cognition may encourage cognitive load. If this happens, it is probable that, in a rushed effort to make a decision, prices are internalised without all the necessary contextual information, such as the type of promotion. The notion that cognition influences the price internalisation process and subsequent decisions is supported in **Chapter 3** (pg 123), where it is shown that intuitive decisions lead to more utilitarian purchase intentions (Dijksterhuis *et al.*, 2006; Gigerenzer and Gaissmaier, 2011).

In **Chapter 4** however, IRP malleability was significantly attributed to both NFC and FII. Specifically, NFC was found to increase malleability, while FII decreased it. Moreover, similar effects were found when considering the interactions between processing styles and consumer experience. An increase in experience, encouraging the use of FII, was attributed to decreases in IRP malleability. Based on the findings presented in **Chapter 4**, it might be concluded that high NFC, a lack of experience and high IRP malleability significantly impact decision utility across promotional practices (*see Chapter 4, study 2*, pg. 166). The effect of financial literacy on IRP-based bias was also noted but requires further testing.

#### **6.2.4 The importance of brand relationships**

Mazumdar and Papatla (1995) suggest that as well as their influence on decisions, IRPs have been linked with a variety of decision-making abilities and consumer behaviours. For instance, IRPs can be used in conjunction with emotion-based brand perceptions to determine whether or not a purchase takes place. In fact, it has been indicated that strong affinity towards a brand increases the product's value perception even if prices are deemed to be 'unfair'. Therefore, it has been concluded that a strong brand relationship may encourage the purchasing of comparatively expensive products; thus, strong brand relationships can bias decisions (Phillips, McQuarrie and Griffin, 2014). While not directly supported in the literature, two studies validated the biasing effect of brand affinity on promotional decision utility (*see Chapter 5*). Moreover, both studies confirmed the significance of a brand affinity dimension, consisting of loyalty, identity and switching costs. When participants were in their favourite retail outlet, with which brand affinity was high, they appeared willing to pay more for the same promoted product. For example, participants of *study 1* in **Chapter 5** were not willing to bear the costs associated with travelling to a less favourable retailer even if it was offering a better deal. This was despite the fact that obtaining the best value for money (VFM) possible was the primary decision objective. A significant interaction between IRP malleability and affinity was also indicated, suggesting that a positive interaction between them may predict biased decisions (*see Chapter 5, study 2, pg. 207*).

#### **6.2.5 The importance of promotional practices on decision utility**

Of all the findings presented, the effect of promotional framing on decision utility was of primary interest. Research on promotions has shown that the way in which prices are framed can have an important effect on many purchase drivers. Among these, price framing was found to impact the perceived value of a brand, price expectancy, what to purchase, how much to purchase and the goal orientation of the purchase (Ahmetoglu *et al.*, 2014; *see Chapter 1* for a review). Although little literature exists, it has been consistently clear that promotions encourage consumers to purchase despite the promotion offering little inherent value. This is true for both monetary and inventory value (Chandon, Wansink and Laurent, 2000).

In support of the theory that promotions can bias decision outcomes, the results of **Chapters 3-5** clearly show that decision utility decreased compared to the control, non-promoted, item when purchasing goods from promotions. This bias was evident even when the promotion offered savings

but was especially noteworthy when the price of the promotion was actually higher than the market average. Based on these findings it could be suggested that some consumers realise, albeit sub-consciously, that the promotions offer less VFM. One explanation is that the promotion itself is responsible for the intent to purchase despite the higher price, while another reason may be that other emotive purchase drivers, such as being brand loyal, offer intrinsic rewards that outweigh potential losses. Although further testing is needed in both regards, the previous five chapters have made it abundantly clear that each promotion has its unique effect on decision utility. Overall, all practices increased the likelihood of making biased purchase intention decisions in comparison to the control.

Among the different practices, drip pricing is consistently found to bias purchase intentions and the utility of decisions the most, while BOGDIF has the least effect. These findings agree with those of previous research which generally show that promotions requiring more price adjustments and calculations during the decision process have a greater tendency to increase the likelihood of bias in decisions. Since drip pricing requires multiple prices adjustments compared to BOGDIF promotions, which require next to none, this theory is supported by the findings. Furthermore, differences between the decision utility for value-based and bundled promotions are generally small. However, as the latter incorporate multiple, possibly dissimilar, items, consumers again may have to make multiple price comparisons and evaluations to ascertain a) the individual price of each constituent item of the bundle and b) if the total price is fair given the individual prices. In comparison, value-based pricing typically requires a simple comparison between the advertised promoted price or discount vs the RRP. Again, both the promotional research and findings from **Chapters 3-5** would suggest that bundling has a slightly more significant effect, possibly due to the calculations required.

### **6.2.6 Aims and hypotheses**

The previous chapters have been significant in developing an understanding of the individual factors that are important in promotional effectiveness as well as decision-making. However, to fully understand the broader issue of how promotions and a consumer's psychology influences decision utility it is crucial to consider, test and evaluate these relationships as a whole. From this, not only will the promotional literature be significantly expanded, but many of the assumptions taken from the broader consumer research will be validated. Furthermore, since one intention of this thesis is to help policymakers to improve fair pricing practices, an understanding of how these dimensions interact to

affect decision-making will be vital as a tool to improve consumer empowerment and education. For example, if financial literacy is essential in helping to improve decisions in promotional contexts, then consumers could be taught this empowering skill. The model may also serve as a valuable marketing tool to help organisations target their marketing efforts toward designing more effective promotions.

Based on the findings and supported by research into consumer behaviour, a model predicting promotional decision utility has been hypothesised (see Figure 16). The presentation of the model is based on the hierarchical and sequential decision evaluation phases (Einhorn and Hogarth, 1981) and the cogno-affective theory (Laroche *et al.*, 2003). Each depicted relationship will be tested, the assumption being that demographics and personality form the basis of the three-phase decision process (Bettman and Park, 1980; Tversky and Kahneman, 1981).

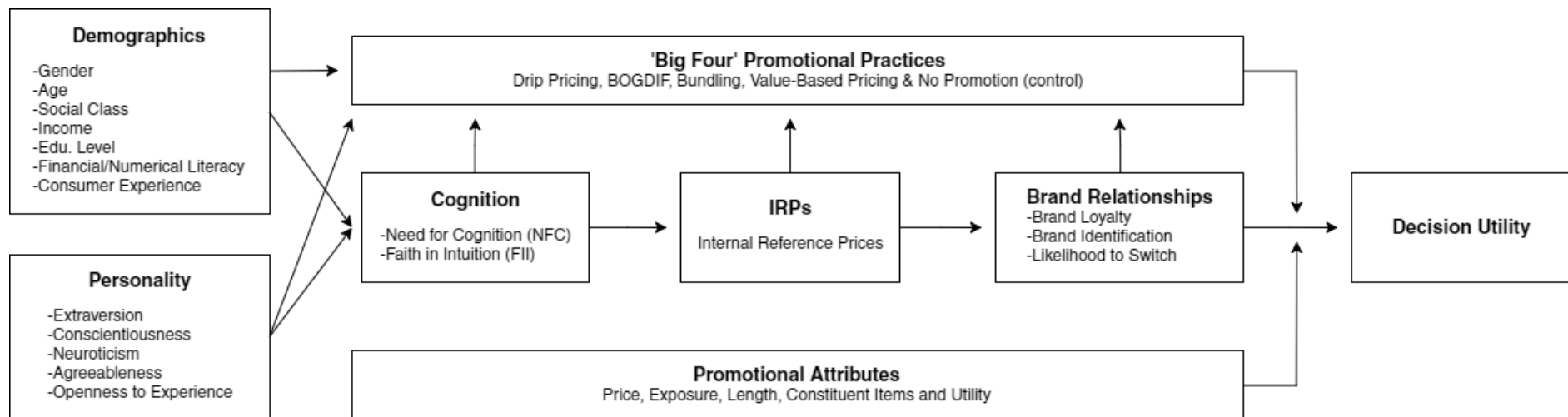


Figure 16. The hypothesised model of decision utility as a function of promotions.

Firstly, demographics and personality help to define whether we interact with and process information as cognitive and/or intuitive thinkers (Haugtvedt, Petty and Cacioppo, 1992). Based on this, it is firstly predicted that both demographics and personality, especially conscientious, social class and income, will predict the processing style of a consumer (H<sub>1</sub>). These three traits, in combination with neuroticism and gender, are also predicted to influence decision utility (H<sub>2</sub>). Moreover, personality and demography can help to encourage empowering consumer traits that aid in information processing. Among these, financial literacy and consumer experience are especially critical.

In the presence of these empowering traits, the processing of information represents the first stage of the decision process. Consequentially, information processing, financial literacy and consumer experience are predicted to have a highly significant effect on FII and NFC. Per the previous findings, it is suggested that higher levels of experience and literacy are predicted to increase FII and decrease NFC (H<sub>3</sub>). This also aligns with the literature that finds expert, intuitive, decision makers to possess this combination of traits. In light of the previous findings and literature, it can also be assumed that FII has the potential to increase decision utility (H<sub>4</sub>). However, the positive effect of NFC on decisions is not to be disregarded, especially in the absence of the literacy and experience. It is, therefore, possible that a positive effect of NFC on utility may be found, although is not a claim that is supported thus far.

Secondly, while processing the stimuli, the consumer needs to assess the 'fairness' of the price. In promotions, utility is typically defined by the price as the primary aim of a promotion is to offer consumers a price-value reward. To assess a price, the consumer retrieves an IRP, using it as a benchmark to ascertain if the price presented is 'fair' compared to others paid. However, it has already been shown that IRPs can be influenced by the way that we internalise information. Therefore, the previous findings would suggest FII, and severely high levels of NFC, to increase the likelihood of IRP malleability (H<sub>5</sub>).

Finally, according to the cogno-affective theory, the third stage in the decision process is the influence of emotional or 'affective' decision drivers. Since price is often considered as the primary driver of promotional purchasing, an evaluation of 'fair' or 'unfair' should be the cognitive precursor in determining a choice. However, as **Chapter 5** shows, brand relationships can significantly

influence a decision. This research shows that a significant proportion of decision variance can be accounted for by IRPs and brand relationships and these two factors appear to be direct predictors of promotional decision outcomes. IRP malleability is therefore predicted to predict brand affinity directly ( $H_6$ ), a dimension consisting of identity, loyalty and switching ( $H_7$ ). As was shown in **Chapters 4 and 5** both IRP malleability and brand affinity are predicted to increase the likelihood of biased purchase decisions ( $H_8$ ). Finally, the significance of these factors in predicting decision utility will be moderated by promotional framing methods, drip pricing and bundling invoking the most biased decisions ( $H_9$ ). This assumption is based on the adverse effects associated with drip and bundling found throughout.

## **6.3 Method**

### **6.3.1 Participants**

A total of 223 participants were recruited from three medium-sized organisations located in central London. No specific selection criteria were used although all participants were working adults from the professional services sector. All the participants were UK residents and included both genders and multiple races and religions. Analysis of demographic factors indicated that the sample was middle-aged ( $M = 44.9$ ,  $SD = 14.8$ ), of middle social class ( $M = 4.1$ ,  $SD = 2.0$ ) and educated to undergraduate level ( $M = 4.4$ ,  $SD = 1.3$ ). Income was higher than average, at between £75k and £100k ( $M = 3.5$ ,  $SD = 1.3$ ). Most participants had at least one child ( $M = 1.3$ ,  $SD = 1.5$ ), were moderately experienced consumers ( $M = 11.2$ ,  $SD = 3.53$ ) and spent on average £230 per week on food ( $M = 229.7$ ,  $SD = 99.4$ ). Personality indices revealed the sample to be highly extraverted ( $M = 8.6$ ,  $SD = 4.3$ ) and open to new experiences ( $M = 9.5$ ,  $SD = 3.0$ ), but also agreeable ( $M = 6.9$ ,  $SD = 3.2$ ), conscientious ( $M = 6.9$ ,  $SD = 3.2$ ) and emotionally stable ( $M = 5.5$ ,  $SD = 3.8$ ). The cohort appeared to be both intuitive (FII) ( $M = 32.6$ ,  $SD = 6.2$ ) and cognitive (NFC) ( $M = 33.8$ ,  $SD = 6.3$ ) in the way that information was processed, and the self-reported level of financial literacy was high ( $M = 35.2$ ,  $SD = 6.8$ ). However, real financial literacy was less impressive ( $M = 2.0$ ,  $SD = 0.7$ ). Finally, loyalty to ( $M = 18.1$ ,  $SD = 3.9$ ), identification with ( $M = 17.6$ ,  $SD = 3.4$ ) and switching from a favourite retailer ( $M = 16.9$ ,  $SD = 3.2$ ) were all shown to be similarly low.

### **6.3.2 Design/Measures**

A between-subjects design was employed to assess decision utility as a function of the promotional practices. Participants were randomly allocated to one of the five promotional conditions used

throughout this thesis. The approach consisted of two experimental phases, both incorporated as part of a rigorous, time-specific, measurement period between the 11<sup>th</sup> and 20<sup>th</sup> December 2016. Each participant was allocated a 45-minute time slot across the working day of 9.00 am – 5.30 pm.

### **Phase One – Behavioural Measures**

Phase one consisted of a 108-item survey. Demographics measured included gender and age. Social class was also recorded, based on the seven social classes in the UK (Butler and Savage, 2013), while income was measured on a 6-point scale, where 1 was equivalent to £0-£25k and 6 was equivalent to £100k. Finally, personality was once again measured using a the ten-item personality index (TIPI - Gosling, Rentfrow and Swann, 2003), which can be considered useful in designs with complex and lengthy measurements (Muck, Hell and Gosling, 2007).

Cognitive and intuitive information processing was measured by Need for Cognition (NFC) and Faith in Intuition (FII), using scales adopted from previous research (see Appendix 4). Utilising 10-point Likert judgements, NFC and FII scales were attributed reliabilities of  $\alpha = 0.78$  and  $\alpha = 0.84$  respectively. These values were in line with previous research (Norris, Pacini and Epstein, 1998). In an extension of dual process models, financial literacy was determined via five self-report items, such as ‘Suppose you had \$100 in a savings account and the interest rate was 2% per year. After five years, how much do you think you would have in the account?’ and was measured on a 10-point aptitude scale (see Appendix 15).

Five numerical reasoning items, which ranged in complexity but were relevant to consumer decision-making, such as ‘£50 – 20%’ to ‘£40 + 5% - 7.5%’, were also used to assess real financial literacy and to highlight any discrepancies from the self-reported index. Finally, to measure consumer experience a four-item scale was adopted from Wallace *et al.*, (2004) (see Appendix 6), which had an average reliability of  $\alpha = 0.9$ . The four items were combined with three additional questions which broadened the scope of the measure, e.g. ‘When it comes to purchasing, how do you rate your experience at... knowing your products, knowing their real price and knowing where to find them?’. The new measure was attributed to high reliability ( $\alpha = 0.76$ ).

Participants were asked to indicate their favourite and least favourite grocery retailers from a list determined by a minimum 2% market share in the UK (see Appendix 1). Using a five-point agreeableness scale, 11 attitudinal items were created to measure psychological associations for both



types of retailers. Items included statements such as ‘They want your money’ and ‘They are loyal to their consumers’ (see Appendix 16).

Questions about brand identity, loyalty and switching costs were sourced and adapted from previously developed, single dimension investigations. In the cases where measurement items were directed toward brands, the question was rephrased to focus upon retailers. The company identity scale (Aaker, Fournier and Brasel, 2004), was made up of six items, such as ‘This supermarket fits well with my current stage of life’ and was measured on an increasing 5-point Likert scale ( $\alpha = 0.912$ ). The company loyalty scale (Harris and Goode, 2004; Hess and Story, 2005) comprised seven items, including ‘I believe that using this store is preferable to other companies’ ( $\alpha = 0.903$ ), while the switching likelihood scale (Burnham *et al.*, 2003) was made up of six items, such as ‘Switching to a new service provider will probably involve hidden costs/charges’ ( $\alpha = 0.905$ ). Items were directed towards participants’ ‘favourite’ grocery retailer.

Psychological distance was measured as the perceived time taken to travel to the consumer’s favourite store. The ‘least favourite’ store was framed as being five minutes away, while the favourite was 10 minutes away. To mimic the real-life costs associated with such choices the former resulted in a delay in questioning of three minutes for the closer store and six minutes for the more distant one. Importantly, participants delaying purchasing for longer were offered cheaper prices than those choosing to travel the shorter distance. In effect, delaying the purchase offered optimal purchasing should price be considered critical by the consumer.

To ascertain IRP malleability, a fictitious purchase scenario was constructed in which participants had to acquire various ingredients for a Christmas dinner party (see Appendix 17). A promotional news flyer was created (see Appendix 9 for an example) which indicated the RRP of not only the products on the purchase list, but other unrelated filler items. RRP were set as the mean prices for the items found in the current UK market. A flyer was also created for each promotional group, which specified the rules of the upcoming promotion in subtext. Finally, the weight and preference for purchasing the items on the list was measured by constructing a cumulative goal orientation matrix. The matrix contained 11 grocery related purchase drivers, such as fat content, value for money, quality and price (see Appendix 18). The weight placed on each of the drivers was used to indicate the goal orientation of each consumer. From this, it could be determined if consumers were utilitarian in their decisions.

## **Phase Two – Experimental Purchase Simulation**

Phase two consisted of an experimental component that incorporated a virtual supermarket created in UNITY (see Appendix 19). The virtual environment provided participants with the ability to navigate a shopping cart around a fully functional store, interact with brands, review nutritional information and go through a full checkout process. The simulation was an adapted version of the 'My supermarket' program. Over 70% of the brand products placed within the simulation were foreign to UK consumers, thus reducing brand preferences among the sample. International brand leaders, such as Coca Cola and Kellogg's, were retained to better reflect what consumers would expect to see in a store of this size. Private label products were not branded and were the target items on the purchase list.

The simulation was uploaded onto 4 42" iMacs, with participants being seated precisely 50cm from the screen whilst conducting the experiment. All screens were angled at 90 degrees and positioned precisely 1.2m across from the participant. The simulation was a self-contained executable program that automatically maximised upon initialisation. A script was created to inform the participants about how to navigate around the simulation, along with its general aims and functions (see Appendix 20).

In order to communicate promotions in the virtual environment, a variety of promotional tags were created (see Appendix 21). Each tag was positioned next to one of the 13 experimental products to symbolise a promotion. Twenty promotional tags were also added randomly throughout the store to other non-related products. All promoted items were located on the middle shelf. For all promotional practices, the tags were coloured red and did not vary in size. Promotions were accepted at the checkout, which was simulated in person by an actor.

Purchase utility was defined by price, with utilitarian/'optimal' prices being the lowest for the corresponding in-store category and 'sub-optimal'/biased ones being the most expensive. Randomly promoted products, which were not on the purchase list, acted as controls and were average options, being neither sub-optimal (biased) nor optimal (utilitarian). Finally, 13 post-purchase questions, such as 'How much would you say that ...price/quality/nutrition played a significant role in your purchase decisions?', were used to determine the extent to which each of the 13 purchase drivers had influenced choice. Outcomes were measured on a 10-point attribution scale.

### 6.3.3 Procedure

Participants were introduced to the study and provided demographic, personality, aptitude (financial literacy) and behavioural measures (FII, NFC, brand identity, loyalty and switching). Upon completion of this phase, participants were then presented with the experimental scenario: a Christmas dinner for three friends for which they had to buy multiple items. For every item on the list, participants provided their IRPs. Following the IRP estimation, each participant indicated the cumulative weight, out of 100%, individually for the 13 decision drivers. In the final part of phase one, a random allocation algorithm split the sample between each of the five promotional conditions (BOGDIF, drip pricing, value-based pricing, bundling and no promotion). Participants were then provided with the shopping list and a corresponding promotional coupon informing them of the terms of their promotional condition. The coupon described the promotions in store, such as “Free 'selected items'” and reiterated the promotional guidelines in subtext. Following an inspection of the list and coupon, participants decided to ‘enter’ either their favourite or least favourite grocery retailer, as determined by the distance parameters previously discussed.

The whole sample was then shown a three-page price flyer, which indicated the average RRP's of the products about to be purchased as well as other non-related products. Participants were given up to four minutes to study this flyer before they were informed of further special price reductions (-5% from discounted price) in a different branch of the same store. Travelling to this branch required an additional 10 minutes of travel (a six-minute real-time delay) that prompted participants to choose between distance, delay and savings. Upon ‘arriving’ at their chosen store participants entered the virtual supermarket. Initially, all participants were provided with the experimental script and invited to practice navigating the virtual environment for up to three minutes. Once this had been completed, the simulation began with participants inputting the £40 budget for their shop. They were then invited to navigate the store for up to 15 minutes, purchasing all the necessary items on their list. Upon checkout, participants indicated the importance of the 13 decision drivers in making their choices in addition to restating their IRP's for each of the compulsory items.

## 6.5 Results

### 6.5.1 Assessing Decision Utility

Decision utility was computed per the weight additive model (WAM) formula presented in **Chapter 1**. Once again, the Utility (U) of choosing to buy product A ( $C^A$ ), can be denoted as  $UC^A$ . The overall utility of choosing to buy option A ( $UC^A$ ) is a function of the weighted importance of each product

attribute ( $W^{An}$ ) and the relative position of that product in the range of options for that attribute ( $Ps^{A1} / \sum P^{An}$ ). Multiplying the weighted importance by the relative position of the product for that attribute provides a raw utility score for each attribute ( $Rs^{An}$ ). The raw score for product A when looking at the price would be denoted as  $Rs^{A1}$ . The raw score for product B when looking at the price would be  $Rs^{B1}$ . The same procedure happens for the other attributes of importance, e.g. quality until all the raw scores have been calculated. Once complete, the raw scores are totalled ( $\sum Rs^n$ ) and multiplied by 100 to give a total utility score ( $UC^n$ ).

In short form the calculation of utility is:

$$Rs^n = Wa^x \times (Ps^x / \sum P^n)$$

$$UC^n = \sum Rs^n * 100$$

In this study, two mean utility scores were created. The first was a utility score for the intended purchases ( $\bar{x}^{UIP}$ ) being made, per the shopping list. This was calculated by summing the total utility scores for the 12 intentional products on the list and then dividing the total by 12 to give an average utility percentage. The second was a mean utility score to account for unintentional purchases ( $\bar{x}^{UUP}$ ), which was a sum of the utility scores ( $UC^n$ ) for the items unintentionally bought and divided by the total number of unintended purchases (NU).

In short form this can be denoted by:

$$\bar{x}^{UIP} = \sum UC^n / 12$$

$$\bar{x}^{UUP} = \sum UC^n / NU$$

Finally, on the basis of these two intentionality totals a total utility score was calculated ( $\bar{x}^{TUP}$ ):

$$\bar{x}^{TUP} = \bar{x}^{UIP} + \bar{x}^{UUP} / 2$$

### 6.5.2 Dimension Construction

Using SPSS 13, a series of confirmatory factor analyses, using principal axis factoring and direct-oblimin rotations, were used to cluster items together. Single one-factor solutions were obtained for the pre-hypothesised dimensions (Table 40). Brand affinity was comprised of the 19 items that made up the loyalty, identity and switching likelihood scales and in this dimension, 87% of the variance was accounted for. A single dimension, named IRP malleability, emerged from the price differences scores (% diff between pre-and post-purchasing) which arose from the 13 price judgements given on the shopping list. A significant proportion of the variance for IRP malleability was explained (81%).

Other single dimensions included NFC (59%), FII (62%), financial literacy (63%) and consumerism (71%), all of which had a moderate, but significant, proportion of variance accounted for.

**Table 40.**

Summary of confirmatory factor analyses and Cronbach reliability statistics for predictor variables.

Scale/Dimension	Items Entered	Reliability (a)	Variance of Factor
Levels of Consumerism (LoC)	4	.69	71%
Brand Affinity	19	.82	87%
IRP Malleability	13	.79	81%
NFC	5	.64	59%
FII	5	.66	62%
Financial Literacy (Self-Report)	5	.62	63%

### 6.5.3 Preliminary Results

A summary of the descriptive statistics for the dependant factors is given in Table 41. This shows that the average length of time spent studying the exposure flyer was roughly 2 minutes and 30 seconds ( $M = 172.4$ ,  $SD = 41.1$ ). IRP malleability was indicated to be above the recall fallibility threshold of 5%, with a mean score of 9.25% ( $SD = 1.26$ ). The utility of intended promoted purchases averaged 69% ( $SD = 11.66$ ). The primary causes of sub-optimal decisions were attributed to incorrectly assessing quality ( $M = 3.00$ ,  $SD = 2.34$ ) and price ( $M = 4.0$ ,  $SD = 2.04$ ). The number of unintentional purchases was relatively high ( $M = 9.00$ ,  $SD = 5.27$ ), with the total utility of these purchases reaching 60% ( $SD = 13.63$ ).

**Table 41.**

Summary of descriptive statistics for dependent factors

	<i>M</i>	<i>SD</i>	<i>S</i>	<i>K</i>
Exposure Time (sec)	172.39	41.12	-0.79	-0.36
IRP Malleability (%)	9.25	1.26	0.09	-0.32
Average 'UIP' (%)	68.86	11.66	0.02	-0.76
Average 'TUP' (%)	60.03	13.63	0.08	-0.72
Number of Unintentional Purchases	9.00	5.27	-0.14	-0.82
Primary Cause for 'UIP' Sub-Optimality	3.00	2.34	0.40	-1.28
Cause 1 (%)	18.92	3.73	0.27	-0.60
Secondary Cause for 'UIP' Sub-Optimality	4.00	2.04	-0.24	-0.99
Cause 2 (%)	13.64	4.00	0.49	-0.28

A series of pairwise t-tests were employed to establish the extent of IRP malleability for the 13 items. Significant differences were found between original and post-purchase IRP judgements for all products (Table 42). However, the findings did not account for utility or promotional conditions. To test the effects of these conditions, one-way ANOVA tests revealed that the promotional practice ( $F(4,219) = 1.454, p < 0.217$ ) and price utility ( $F(1,222) = 0.550, p < 0.459$ ) did not significantly affect IRP malleability. Instead, price malleability appeared to be a function of recent exposure to lowered prices.

**Table 42.**

Summary of pairwise t-tests between original and post-exposure IRP judgements for experimental products.

	Mean	t	p (2-tailed)
IRP Champagne - New IRP Champagne	-3.00161	-122.725	<b>.000</b>
IRP Red Wine - New IRP Red Wine	-0.82379	-60.776	<b>.000</b>
IRP Red Onions - New IRP Red Onions	-0.05424	-13.319	<b>.000</b>
IRP Tomatoes - New IRP Tomatoes	-0.14196	-38.321	<b>.000</b>
IRP Large Mushroom Pack - New IRP Large Mushroom Pack	-0.12545	-20.314	<b>.000</b>
IRP Gourmet Cheese - New IRP Gourmet Cheese	-1.71125	-53.802	<b>.000</b>
IRP Luxury Salami - New IRP Luxury Salami	-2.37330	-82.767	<b>.000</b>
IRP Ice-Cream - New IRP Ice-Cream	-0.49665	-37.977	<b>.000</b>
IRP Pasta - New IRP Pasta	-0.24946	-38.840	<b>.000</b>
IRP Soup - New IRP Soup	-0.16862	-25.980	<b>.000</b>
IRP Rolls - New IRP Rolls	-0.33987	-37.540	<b>.000</b>
IRP Prawns - New IRP Prawns	-0.20371	-36.013	<b>.000</b>
IRP Soda - New IRP Soda	-0.16902	-9.258	<b>.000</b>

With regard to decision utility for intended purchases (UIP), one-way ANOVA tests revealed significant differences in utility between both promotional practices ( $F(4,219) = 116.28, p < .01$ ) and price optimality conditions ( $F(1,222) = 18.4, p < .001$ ). For the latter (*see* Figure 17), a significant difference in decision utility was apparent for both utilitarian ( $F(4,99) = 51.99, p < .01$ ) and biased ( $F(4,115) = 74.67, p < .01$ ) pricing conditions. From this, it appears that decision utility varies as a function of both the promotion and pricing. This is supported by the fact that decision utility was highest for the non-promoted control items and lowest for drip priced products.

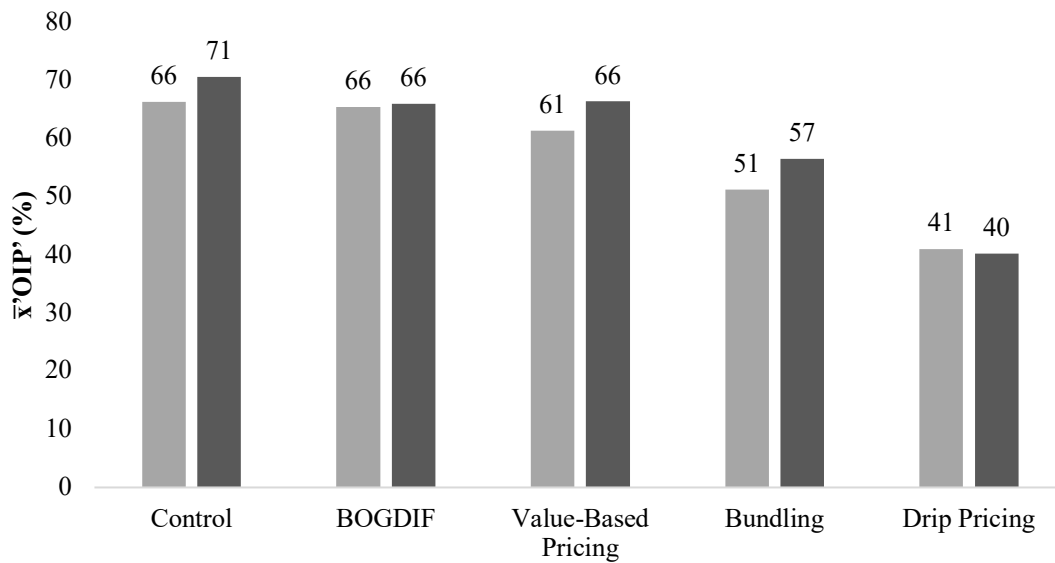


Figure 17. Histogram depicting intended promotional purchase optimality (UIP %) as a function of the promotional practice and the optimality conditions: ■ biased ■ utilitarian

Post-hoc t-tests indicated significant differences between decision utility for the clear majority of practices. For instance, the utility of both drip and bundle priced purchases differed in comparison to all other promotional practices. Decision utility for value-based priced purchases was non-significant in comparison to BOGDIF purchases in the utilitarian pricing condition (MD = 0.59, SE = 1.83,  $p < 1.00$ ), but significant across all other practices. Similarly, decision utility between BOGDIF and non-promoted purchases was non-significant in the biased pricing condition (MD = 0.356, SE = 1.83,  $p < 1.00$ ), but significant for all others.

Thus, two findings emerged. Firstly, optimally (discounted) priced products generally increased the decision utility of intended purchases. The one exception to this was drip pricing, where decision utility was marginally higher in the biased pricing condition. Secondly, there was a marked difference in decision utility as a function of the promotion. The practices that produced the least intended decision utility as a function of biased prices were bundling and drip pricing. However, decision utility remained relatively low for all practices with the differences between them being relatively small.

Next, decision utility for unintended purchases (TUP) was examined. This differed significantly as a function of the promotional practice ( $F(4,219) = 128.22, p < .001$ ) and pricing condition ( $F(1,222) = 12.61, p < .001$ ). Bundling and drip pricing still produced the least decision

utility (see Figure 18). BOGDIF led to the most utility, even in the biased pricing condition, exceeding that of the control. As expected, the utilitarian pricing condition generally resulted in more better decisions.

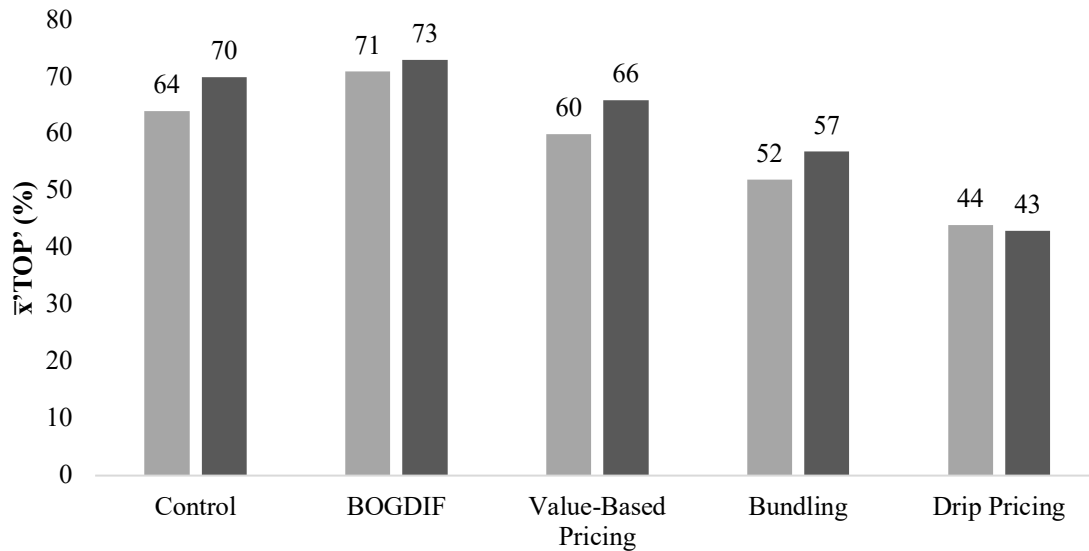


Figure 18. Histogram depicting total promotional purchase utility (TUP %) as a function of the promotional practice and the price optimality conditions: ■ biased, ■ utilitarian

### 6.5.4 Model Testing

Using AMOS 13, structural equation modelling (SEM) was used to test the hypothesised model.. As the literature suggests and the findings in this thesis indicate, several behavioural factors have the potential to impact decision outcomes. Furthermore, these behavioural factors have been indicated to moderate the effect of promotions on making utilitarian decisions. Using the factors derived from the factor analyses, personality items (totalled, per the practices of the TIPI (Savage *et al.*, 2013)) and a composite distance score (created from the distance choice made), a rigorous modelling process was undertaken in accordance with literature (Hoyle, 1995; McDonald & Ho, 2002).

First, dimension symmetry and kurtosis concentrations were inspected to assess manifest variable distribution. Cutoffs between -2 and +2 were considered acceptable per previous reviews (George & Mallery, 2010). All variables meet the more conservative criteria of -1 to 1 (Chan, 2013). Second, the data was inspected for spurious outliers and missing data, neither being identified. Third, the



correlation matrix was inspected for outlier correlations between manifest variables. Correlations indicated few relationships of concern outside the scope of the tested model, all of which were to be accounted for in any case.

Per similar research, the hypothesised model utilised Maximum Likelihood (ML) estimation to test for significance. Robust and suitable in scenarios in which sample sizes are small (Boomsma, 1997), around 200 cases, ML is more contextually suitable than weighted least squares estimation or Satorra-Bentler chi-square corrections (Chou & Bentler, 1995; Boomsma, 1997). Considering other model fit indices, e.g. RMSEA or GFI, scholars have noted that many of these measures are subject to significant bias from the sample size. As such, they are often used in combination (Gerbing & Anderson, 1993). Others argue that these fit indices do not add anything to the analysis (e.g., Barrett, 2007) and so only thus only the chi-square should be interpreted. However, it is generally accepted that the chi-square test is too liberal, i.e., too many Type 1 errors, when variables have non-normal distributions (Gerbing & Anderson, 1993). In light of this, the research shows that chi-square needs to be used in combination with a number of indices.

While the consensus for more traditional indices, e.g. Goodness of Fit (GFI) is to avoid them (Sharma, Mukherjee, Kumar, & Dillon, 2005), the Tucker-Lewis Index (TLI) and RMSEA are among the most commonly used measures in SEM. Moreover, the two are often used in combination given that the TLI is an incremental measure and RMSEA absolute measure. At the most basic level, the TLI can adjust for model complexity, accounting for increases in the number of parameters. In contrast, the RMSEA considers the obtainment of the true model an ideal and thus assesses the experimental model as an approximation of the true. Simulation research has identified that the significance and use of both together to be standard practice, TLI scores indicating good fit for values above .85 and RMSEA less than .05 (Gerbing & Anderson, 1993; Chou & Bentler, 1995; Boomsma, 1997). However, as with all things SEM, these cut-offs are debated considerably. MacCallum, Browne and Sugawara (1996) for instance have used RMSEA cut-offs of .01, .05, and .08 to indicate

excellent, good, and mediocre fit, respectively. Given that these cut-offs are dependent on the real population, one that will never be fully known, significance indices of .1 are generally thought to be robust enough. Since these cutoffs account for a range of model fits, this SEM analysis will adopt this range in combination with the PCLOSE value; a one-sided test of the null hypothesis is that the RMSEA equals .05, to assess model fit.

### **SEM Procedure and Results**

As the SEM was created, non-significant paths outside the scope of the hypothesised model were removed. Modification indices, combined with measures of model fit, were used to find the most likely relationships among the hypothesised variables. The resultant structural model (*see* Figure 19) was found to be significant ( $\chi^2(505, n = 223) = 296.05, p < .001$ ) and was attributed a moderate fit to the data (RMSEA = 0.69, PCLOSE = 0.059, TLI = 0.798).

As promotional practices remained unaccounted for by the model testing procedure, a between-groups SEM was conducted. Two model variations were tested: an 'unconstrained' model, which considered the equality between configurable paths only, and a 'structural weights' model, which considered the equality of all hypothesised paths. In order to test for a difference between the models specific to each promotional practice, the structural weights model had its paths set as equal. Given the small sample sizes per pricing condition, a bootstrap sample of  $n = 200$  was used. This method is largely supported in the SEM literature (Ievers-Landis *et al.*, 2011).

In the between-practice analysis, the model was also found to be significant ( $\chi^2(505, N = 223) = 770.49, p < .001, TLI = 0.863, RMSEA = 0.062, PCLOSE = 0.052$ ). Nested model comparisons revealed a significant difference between practice dependant models when the unconstrained model was assumed to be true (CMIN = 124.46,  $p < .003$ ). Thus, it can be concluded that practices result in different moderation effects on the hypothesised model, which in turn influences decision utility. No further modifications yielded a markedly better fit.

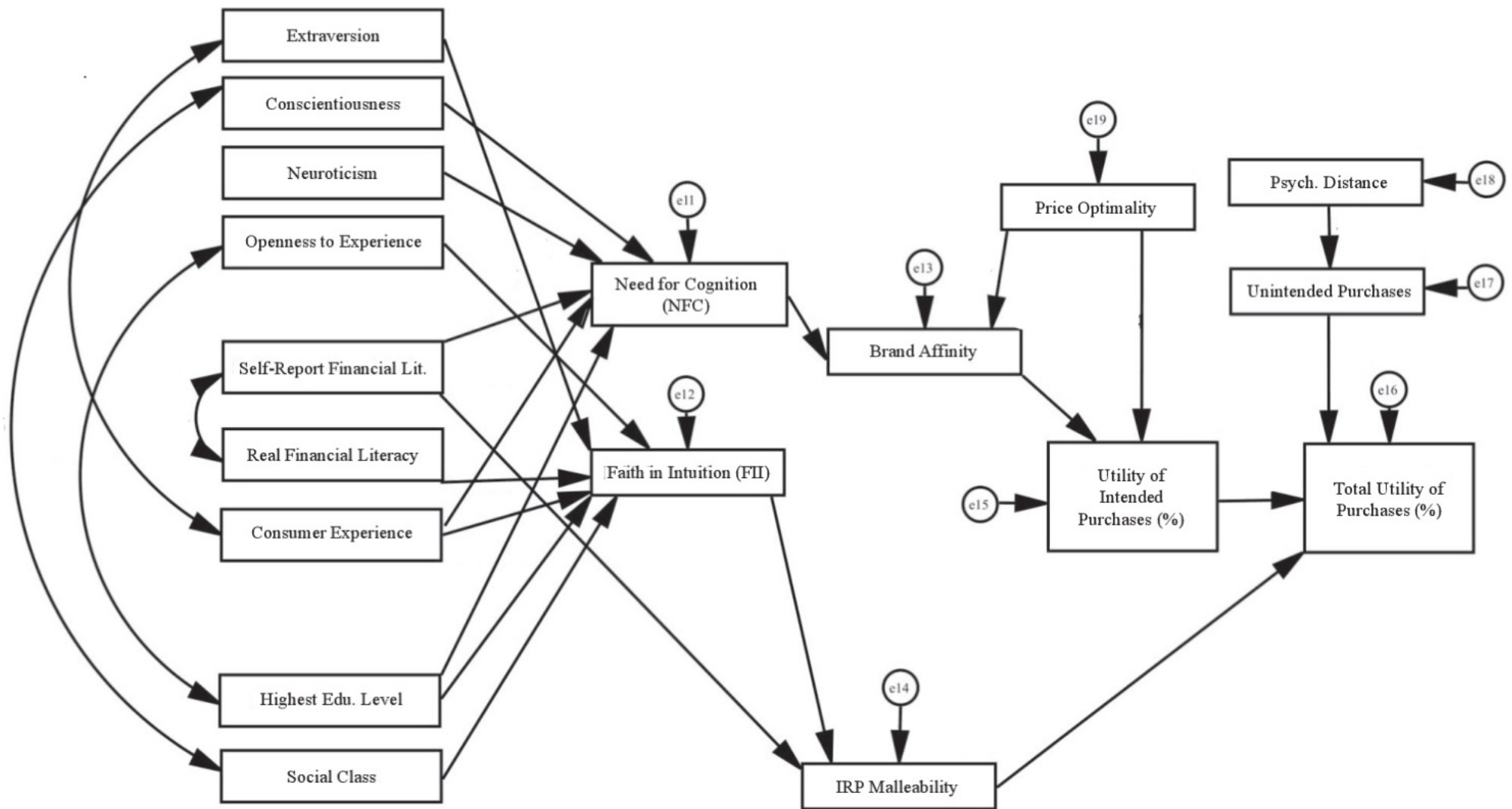


Figure 19. The most parsimonious and significant model of decision optimality as a function of the hypothesised dimensions of interest, not accounting for promotional practices however ( $\chi^2=296.05$ ,  $p < .001$ , RMSEA = .69, PCLOSE = .059, TLI = .798).

Given the significant differences in utility between promotional practices, five structural weight models emerged from the data (see Figures 20-24). Each model explained a different amount of the variance attributed to UIP. The drip-pricing model explained the most, with an  $R^2$  of 0.29, or 29%, while the non-promotional model accounted for the least ( $R^2 = 0.19$ ). The variance in TUP was deemed less important due to the majority of its variance being accounted for by UIP. Standardised parameter estimates across and between practice models indicated an array of significant relationships (see Table 43), with a number of interesting standardised indirect effects also being observed (see Appendix 22).

Finally, a number of correlations were also observed between demographic and personality traits. These constitute an important component of the model as they essentially compound the observed effects. Therefore, in cases where a correlation between variables was observed, it is important to note that the effect, while significant, was a result of the combined variables. Significant correlations were found between social class and conscientiousness for value-based pricing ( $r = 0.57$ ,  $p < .001$ ), education and openness to experience for BOGDIF promotions ( $r = 0.34$ ,  $p < .005$ ), consumer experience and extraversion for bundling ( $r = 0.46$ ,  $p < .002$ ) and, finally, between real and self-reported financial literacy for the control situation ( $r = 0.62$ ,  $p < .001$ ).

**Table 43.**

Unstandardized and standardized parameter estimates per the five practice driven models of purchase utility, between practices moderation effects are indicated.

		<i>Unstandardized Estimates (B)</i>		<i>Standardised Estimates (β)</i>				<i>Significance Factors</i>		<i>Nested Model Comparisons</i>		
		B	C.	BOG.	VB.	BUN.	DRIP.	C.R.	p	DF	CMIN	p
Neuroticism	→ NFC	.582	.308	.327	.357	.339	.374	7.504	<b>.000</b>	4	16.653	<b>.002</b>
Conscientiousness	→ NFC	.376	.171	.165	.221	.196	.194	3.980	<b>.000</b>	4	5.962	.202
Education Level	→ NFC	.465	.090	.106	.091	.098	.117	1.769	.051	4	4.887	.299
Financial Literacy (S.R)	→ NFC	.376	.428	.379	.429	.344	.451	7.146	<b>.000</b>	4	14.672	<b>.005</b>
Consumer Experience	→ NFC	-1.039	-.311	-.281	-.294	-.306	-.266	-6.183	<b>.000</b>	4	3.372	.498
Need for Cognition (NFC)	→ Brand Affinity	-.911	-.061	-.076	-.070	-.081	-.075	-1.132	<b>.000</b>	4	5.65	.227
Openness to Experience	→ FII	.736	.351	.298	.365	.373	.416	7.973	<b>.000</b>	4	2.049	.727
Price Optimality	→ Brand Affinity	-.733	-.222	-.195	-.238	-.223	-.216	-2.933	<b>.003</b>	4	6.478	.166
Real Financial Literacy	→ FII	1.691	.204	.170	.193	.196	.181	4.297	<b>.000</b>	4	1.183	.881
Extraversion	→ FII	.524	.309	.293	.315	.312	.244	6.601	<b>.000</b>	4	9.749	<b>.045</b>
Education Level	→ FII	.692	.130	.161	.127	.159	.151	3.106	<b>.002</b>	4	2.704	.609
Social Class	→ FII	.633	.184	.219	.220	.210	.191	4.728	<b>.000</b>	4	5.212	.266
Consumer Experience	→ FII	.893	.211	.263	.250	.307	.267	5.898	<b>.000</b>	4	10.271	<b>.032</b>
Psych. Distance	→ Unplanned Purchases	.971	.163	.210	.190	.183	.219	2.908	<b>.004</b>	4	10.369	<b>.035</b>
Brand Affinity	→ UIP (%)	-2.338	-.323	-.357	-.344	-.359	-.450	-5.976	<b>.000</b>	4	12.859	<b>.012</b>
Price Optimality	→ UIP (%)	1.831	.142	.148	.144	.162	.202	2.585	<b>.010</b>	4	12.438	<b>.014</b>
FII	→ IRP Mall.	.058	.121	.129	.131	.134	.149	1.729	<b>.048</b>	4	4.452	.348
Financial Literacy (S.R)	→ IRP Mall.	-.035	-.144	-.128	-.134	-.117	-.149	-1.757	<b>.049</b>	4	5.063	.281
Unplanned Purchases	→ TUP (%)	-.707	-.255	-.278	-.279	-.295	-.333	-16.694	<b>.000</b>	4	5.224	.265
UIP (%)	→ TUP (%)	.874	.900	.884	.925	.933	.912	52.063	<b>.000</b>	4	8.999	<b>.050</b>
IRP Malleability	→ TUP (%)	-.114	-.121	-.124	-.127	-.123	-.131	-1.514	.051	4	9.122	<b>.049</b>

C = Control

BOG = BOGDIF

VB = Value-Based Pricing

BUN = Bundling

DRIP = Drip Pricing

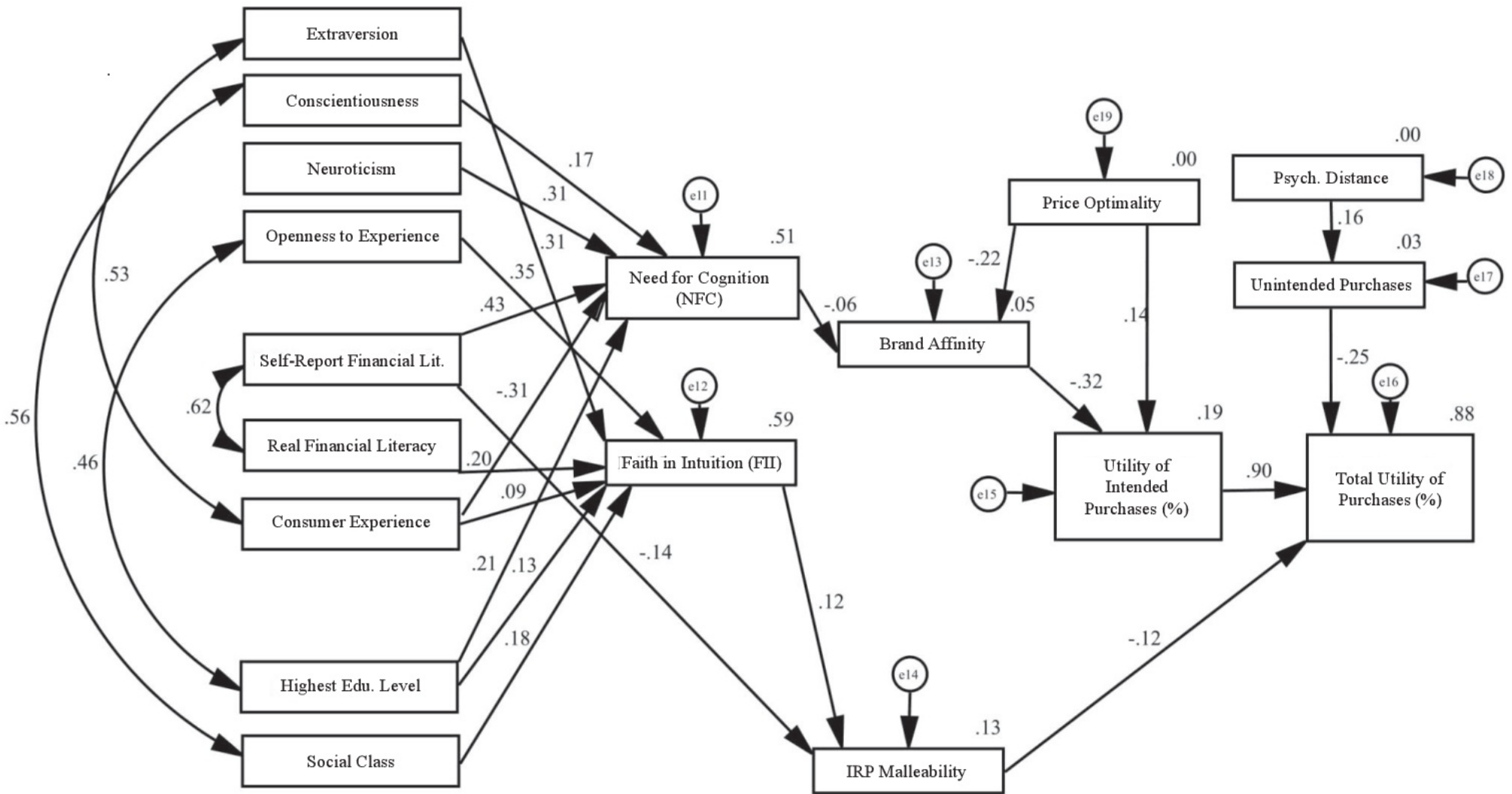


Figure 20. The most parsimonious and significant model of decision utility as a function of the hypothesised dimensions of interest, moderated by the control / non-promotion condition.

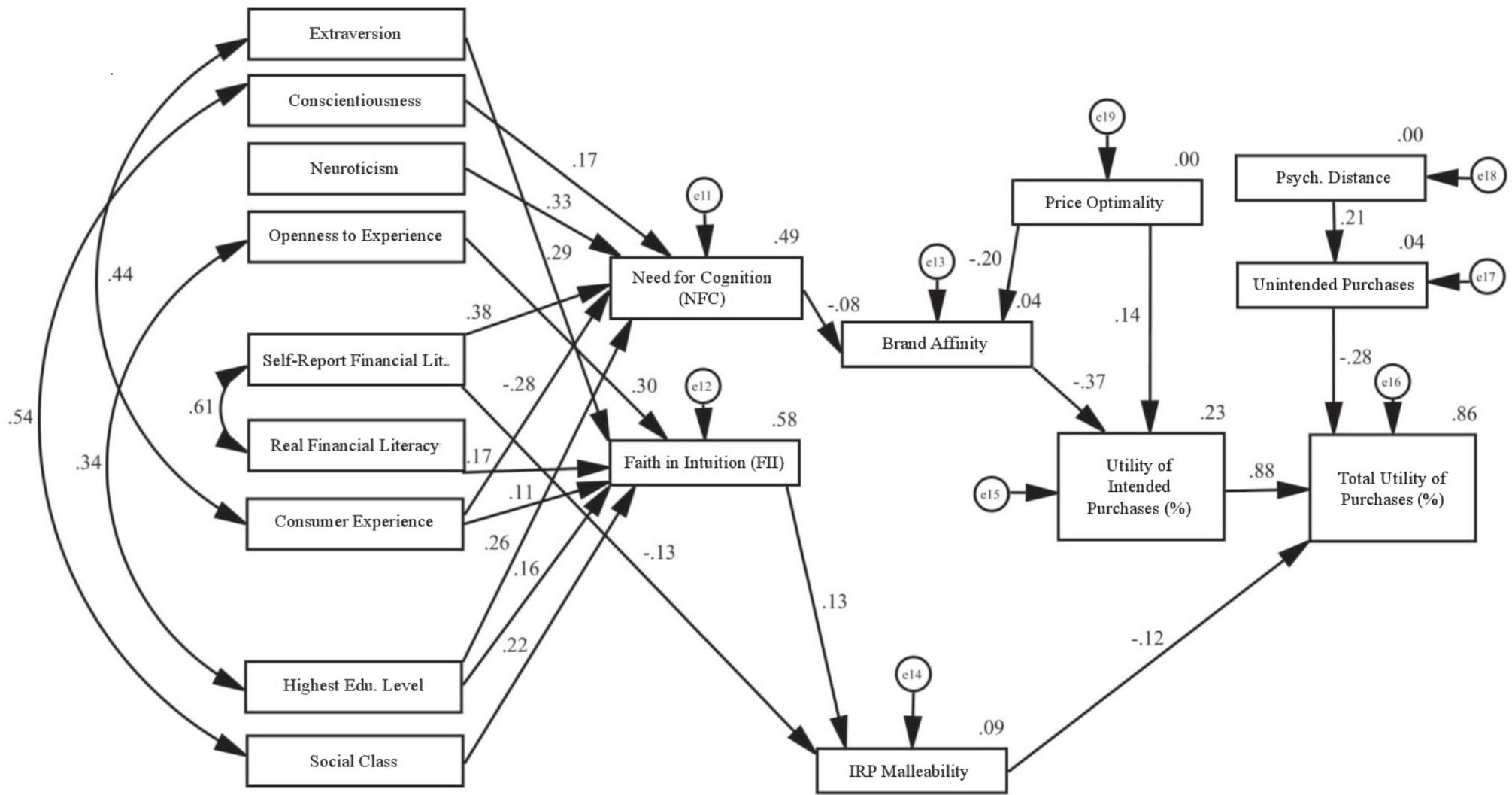


Figure 21. The most parsimonious and significant model of decision utility as a function of the hypothesised dimensions of interest, moderated by the BOGDIF promotional practice.

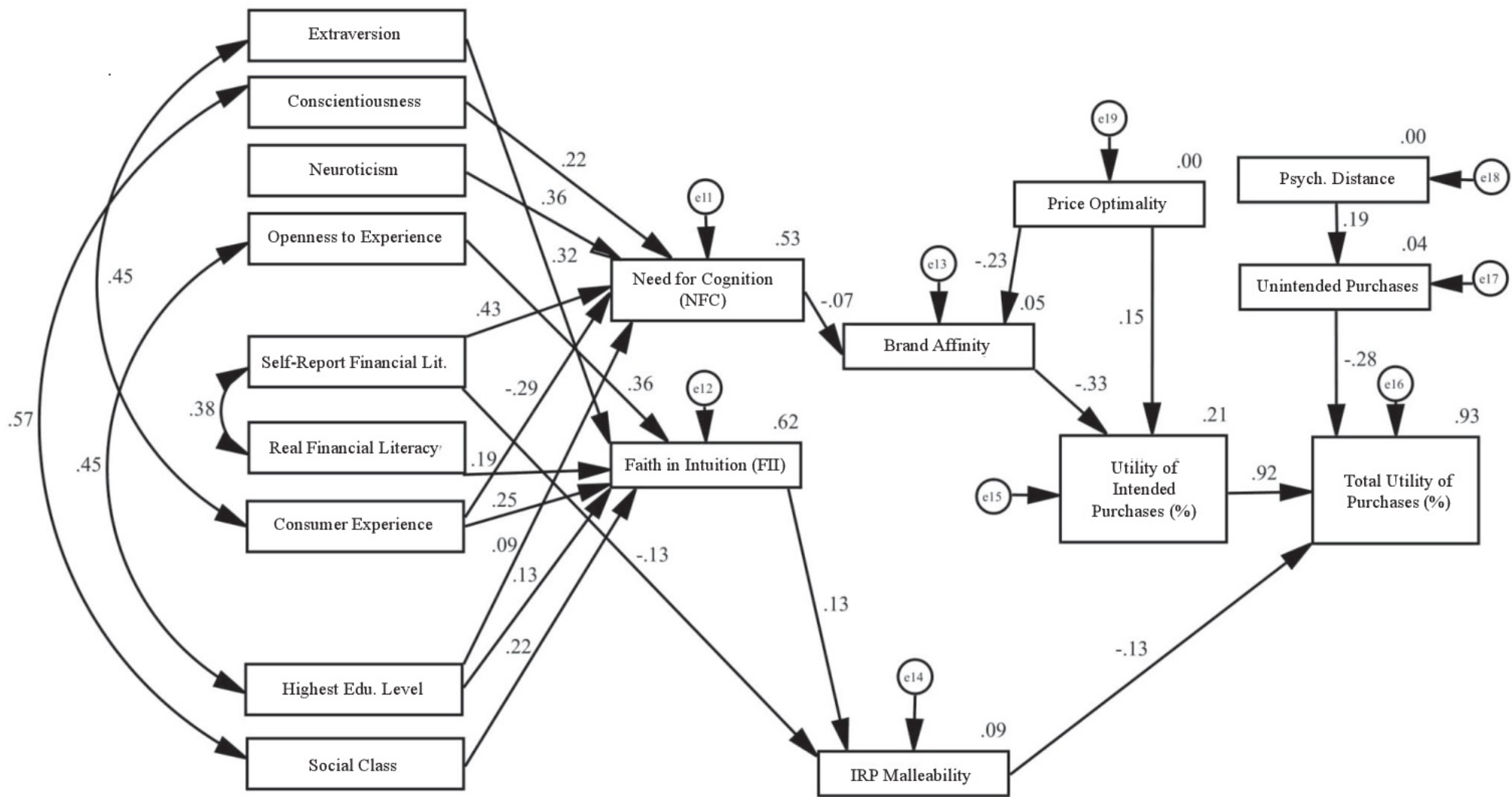


Figure 22. The most parsimonious and significant model of decision utility as a function of the hypothesised dimensions of interest, moderated by Value-Based pricing practice.



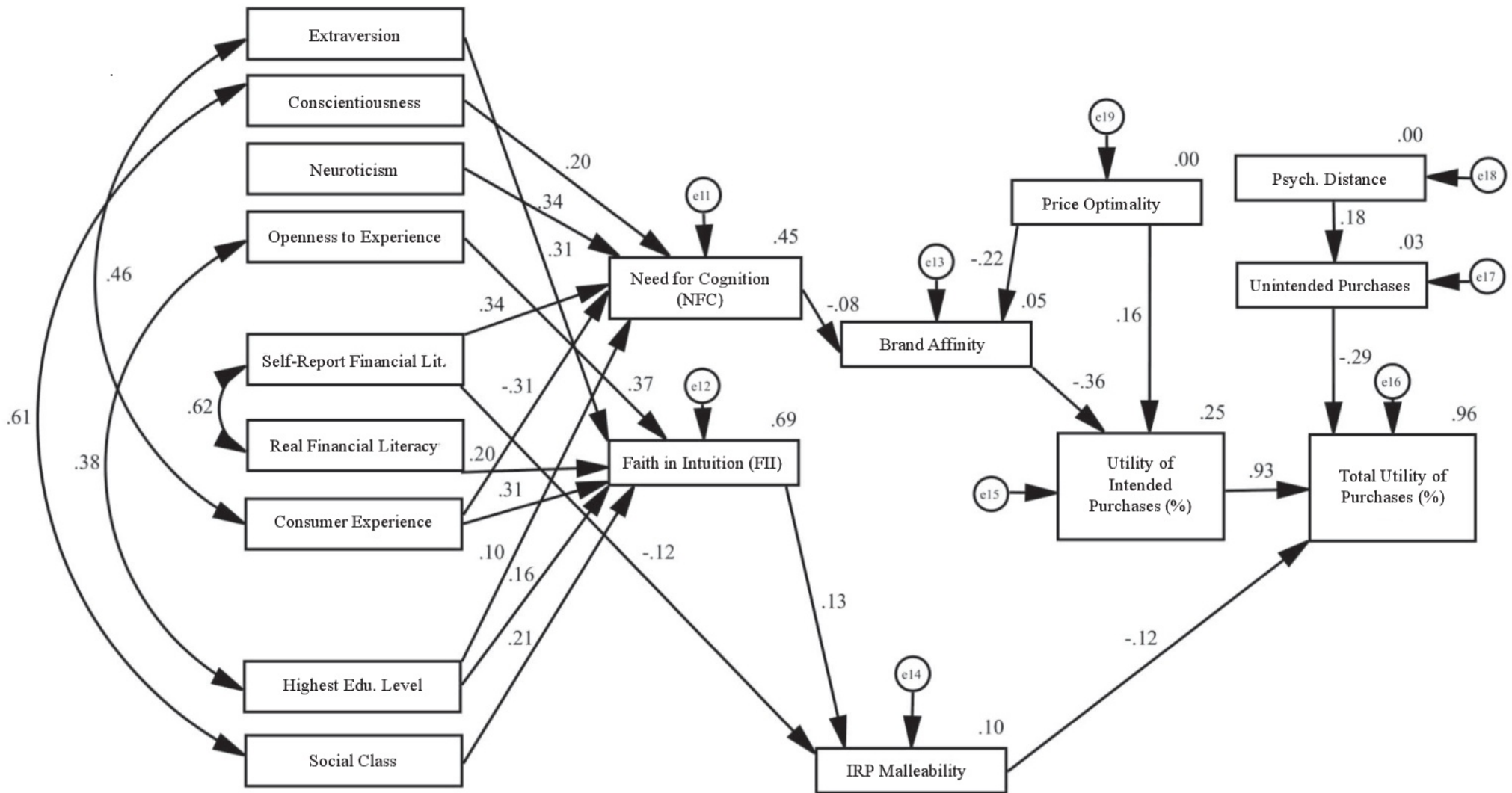


Figure 23. The most parsimonious and significant model of decision utility as a function of the hypothesised dimensions of interest, moderated by the Bundling promotional practice.

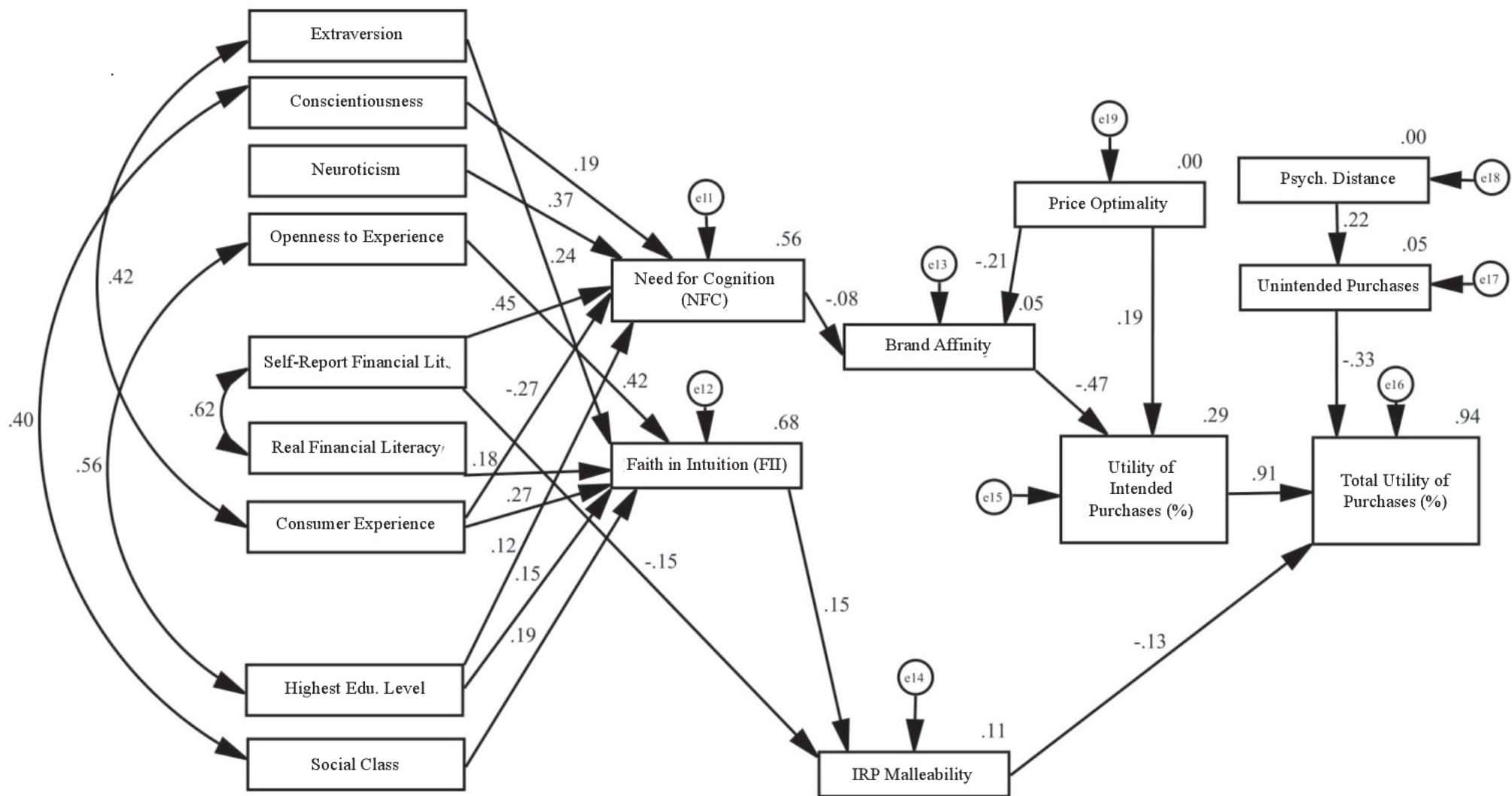


Figure 24. The most parsimonious and significant model of decision utility as a function of the hypothesised dimensions of interest, moderated by the Drip pricing practice.

## Demographics and Empowering Traits

### Direct Effects

Among the demographic variables, social class positively predicted FII for all the promotional practices ( $B = 0.633, p < .001$ ). When UIP and UTP were examined, the strongest relationship between SES and FII was found for value-based pricing ( $\beta = 0.220$ ), but the differences between practices were non-significant ( $CMIN = 5.212, p < .266$ ). The effect of education was considerably weaker and it only marginally predicted NFC across practices ( $B = 0.465, p < .051$ ). This was particularly apparent for drip pricing ( $\beta = 0.117$ ), BOGDIF ( $\beta = 0.106$ ) and bundling ( $\beta = 0.098$ ) when compared to the control ( $\beta = 0.90$ ). However, despite the differences in effect sizes, these were not large enough for promotional practices to significantly differ between one another in their effect on UTP ( $CMIN = 4.887, p < .299$ ). Furthermore, education directly predicted FII ( $B = 0.692, p < .002$ ), especially when moderated by BOGDIF ( $\beta = 0.161$ ) and bundling ( $\beta = 0.159$ ). However, there was no significant moderating effect between education and practice-dependant TUP ( $CMIN = 2.704, p < .609$ ). Given that the effect of education on FII was considerably higher than on NFC, it would seem prudent to conclude that higher education increased FII and subsequently IRP malleability. No other significant demographic factors were identified.

Throughout this thesis, the two traits that have been found to be particularly influential on decision outcomes are consumer experience and financial literacy. While they have not been shown to predict UIP or UTP directly, both traits are linked to the way that consumers process and internalise prices.

Firstly, consumer experience was found to positively predict FII ( $B = 0.893, p < .001$ ). This effect differed between practices ( $CMIN = 10.271, p < .032$ ) and was especially marked for bundling ( $\beta = 0.307$ ), drip pricing ( $\beta = 0.267$ ) and BOGDIF ( $\beta = 0.263$ ) promotions. In contrast, consumer experience negatively predicted NFC ( $B = -1.039, p < .001$ ). However, despite the effects being slightly stronger for bundling ( $\beta = -0.306$ ) and value-based pricing ( $\beta = -0.294$ ) than for drip pricing ( $\beta = -0.266$ ), the differences between practices was non-significant ( $CMIN = 3.372, p < .498$ ). In line with previous studies, it can therefore be concluded that experience prompts the use of FII.

Secondly, both real and self-reported financial literacy were found to influence information processing. Real literacy positively predicted FII ( $B = 1.691, p < .001$ ) and self-reported NFC ( $B =$

0.376,  $p < .001$ ). For FII, no differences were found across practices. However, for NFC, there were significant variations across promotions (CMIN = 14.672,  $p < .005$ ), with the effect being strongest for drip pricing ( $\beta = 0.451$ ) and value-based ( $\beta = 0.429$ ) TUP. Self-reported literacy also had a significant, but negative, effect on IRP malleability ( $B = -0.035$ ,  $p < .049$ ), although it did not differ between practices (CMIN = 5.063,  $p < .281$ ).

### **Indirect Effects**

A number of significant indirect or mediated effects were observed for several demographic traits. Firstly, social class had a positive indirect effect on IRP malleability across all practices. The effect was most significant for value-based pricing ( $\beta = 0.029$ ), closely followed by drip priced ( $\beta = 0.028$ ) and BOGDIF ( $\beta = 0.028$ ) items. IRP malleability was also negatively predicted by education level, although the difference was only significant for drip priced ( $\beta = -0.022$ ) and BOGDIF ( $\beta = -0.021$ ) items.

Although consumer experience had an adverse indirect effect on IRP malleability, especially for bundling ( $\beta = -0.037$ ) and the control scenario ( $\beta = -0.037$ ), real financial literacy had a positive effect. While the results were only marginally significant, this positive relationship contradicts previous findings. Furthermore, self-reported literacy was found to have an adverse indirect effect on brand affinity via NFC. This effect was most prominent for drip priced ( $\beta = -0.024$ ) and non-promoted ( $\beta = 0.117$ ) products, and while this may reflect the findings of previous studies, the results are by no means conclusive. This will be discussed in greater detail later in the thesis.

## **Personality**

### **Direct Effects**

Personality indices significantly predicted numerous dimensions. Firstly, neuroticism positively predicted NFC ( $B = 0.582, p < .001$ ), with the effect being especially marked for drip priced ( $\beta = 0.374$ ) and value-based ( $\beta = 0.357$ ) UTP. This relationship was found to be highly significant between practices ( $CMIN = 16.653, p < .002$ ). Secondly, conscientiousness predicted NFC ( $B = 0.376, p < .001$ ), particularly for value-based ( $\beta = 0.221$ ) and bundling ( $\beta = 0.196$ ) priced UTP. However, the differences in effects between practices were not significant ( $CMIN = 5.962, p < .202$ ). Neither neuroticism nor conscientiousness were found to directly predict UTP, despite indications in the literature. However, the effect of neuroticism on NFC was stronger than that of conscientiousness. Finally, extraversion was found to be a positive predictor of FII ( $B = 0.524, p < .001$ ). The effects were particularly strong for value-based ( $\beta = 0.357$ ) and bundling ( $\beta = 0.357$ ) UTP and there were significant differences between practices ( $CMIN = 9.749, p < .049$ ).

### **Indirect Effects**

Extraversion and openness to experience combined to have a significant and positive influence on IRP malleability. The effect of extraversion was highest for value-based ( $\beta = 0.041$ ) and non-promoted ( $\beta = 0.041$ ) products, while openness had more influence on drip priced ( $\beta = 0.062$ ) items. Although neuroticism did not affect malleability, it appeared to have a negative mediated effect on brand affinity, in line with some recent studies elsewhere. However, the effect was only marginally significant for drip priced ( $\beta = 0.02$ ), value-based ( $\beta = 0.02$ ) and non-promoted items ( $\beta = 0.022$ ). Finally, although conscientiousness was included in the model, it had no significant indirect effect on any outcome variable.

## **Information Processing**

### **Direct Effects**

When the factors associated with the processing of price stimuli were examined, NFC was found to negatively predict brand affinity ( $B = -0.911, p < .001$ ) and its influence on purchase utility. Although the effect was strongest for bundling ( $\beta = -0.081$ ) and no promotion ( $\beta = -0.079$ ), there was no significant between-promotions difference ( $C_{MIN} = 5.65, p < .227$ ). Furthermore, although FII did not predict brand affinity, it did have an effect on IRP malleability ( $B = 0.058, p < .048$ ). The effect was particularly strong for both drip pricing ( $\beta = 0.149$ ) and bundling ( $\beta = 0.134$ ), although again the difference between practices was non-significant ( $C_{MIN} = 4.45, p < .348$ ). This finding concurs with previous work that has suggested that being too intuitive, and therefore not giving enough consideration to information, may increase the likelihood of malleable IRPs.

### **Indirect Effects**

NFC had a positive indirect influence on UIP and TUP. Specifically, NFC had a particularly strong effect in increasing UIP in relation to drip priced ( $\beta = .025$ ) and bundled ( $\beta = .022$ ) products. NFC also indirectly predicted TUP for both of these practices, but not for the other promotions. No significant effects were observed for FII.

## **IRP Malleability and Brand Affinity**

### **Direct Effects**

In contrast to the hypotheses, IRP malleability was not predicted by NFC, nor was it a significant predictor of brand affinity. Despite this, IRP had a negative effect on TUP ( $B = -.114, p < .051$ ) although it had no influence on UIP. Therefore, these findings indicate that increases in malleability degrade overall decision utility, although this was not true for intended purchases. The weak effect was significantly moderated by promotional practices ( $CMIN = 9.122, p < .049$ ) and will require further validation. The effects of IRP malleability on TUP were particularly strong for drip ( $\beta = -0.131$ ) and value-based ( $\beta = -0.127$ ) pricing.

Finally, brand affinity had a highly significant, but negative, effect on the utility of intended purchases ( $B = -2.338, p < .001$ ). The effect of affinity on TUP was strongest for drip pricing ( $\beta = -0.450$ ), with slightly less effect being seen for bundling ( $\beta = -0.359$ ) and BOGDIF ( $\beta = -0.357$ ) promotions.

### **Indirect Effects**

The only indirect effect observed was that of brand affinity on TUP. As with UIP, brand affinity had a significantly negative effect on TUP, especially for drip priced ( $\beta = -0.425$ ) and bundled ( $\beta = -0.341$ ) products.

## **Experimental Conditions (Distance and Price Optimality)**

### **Direct Effects**

The two experimental conditions, namely psychological distance and price utility were found to have significant effects on purchasing behaviours. It was found that optimal / utilitarian prices increased UIP ( $B = 1.831, p < .010$ ), a relationship that was moderated by pricing practices ( $CMIN = 12.438, p < .014$ ). Specifically, the relationship was stronger as a function of drip pricing ( $\beta = 0.202$ ) and bundling ( $\beta = 0.162$ ) in comparison to the control ( $\beta = 0.137$ ). Furthermore, the optimal price parameter was a negative predictor of brand affinity ( $B = -0.733$ ) and its effect on UIP. The relationship was not moderated by the promotional practice used ( $CMIN = 6.478, p < .166$ ).

The second component, psychological distance, had a significant effect on the number and utility of unplanned purchases ( $B = 0.971, p < .004$ ). This effect differed across promotional practices ( $CMIN = 10.369, p < .035$ ), the influence being strongest for drip priced ( $\beta = 0.219$ ) and BOGDIF ( $\beta = 0.210$ ) products. Taken together, the findings indicate that distance increased the utility of unplanned purchases and that, when faced with utilitarian, discounted, prices, consumers did indeed obtain at better decision outcomes that fulfilled their purchasing goals.

### **Indirect Effects**

As expected, the pricing condition had a positive effect on both UIP and TUP, with more savings equating to more utilitarian outcomes. Once again, the effect was particularly apparent for drip priced ( $\beta = 0.097$ ) and bundled ( $\beta = 0.080$ ) items, with these results also impacting on TUP. Finally, psychological distance had a negative indirect effect on TUP, through its effect on UIP. This was especially the case for drip priced ( $\beta = 0.137$ ) and BOGDIF ( $\beta = 0.137$ ) items.



## Decision Utility

Unsurprisingly, the bias associated with UIP significantly and positively predicted variance in TUP ( $B = 0.87, p < .001$ ). As hypothesised, the relationship was moderated by promotional practices ( $CMIN = 8.99, p < .05$ ). This suggests that, as well as the full model, the overall effect of decision utility was moderated by promotional practices. Specifically, the effect of UIP on TUP was particularly marked for TUP associated with bundling ( $\beta = 0.933$ ) and value-based ( $\beta = 0.925$ ) promotions. This suggests that if consumers could overcome the biases associated with these methods, their overall decision utility may substantially increase.

In a further exploration of some of the processes involved in UIP, it appeared that post-purchase judgements had no significant effect on the utility scores (*see* Table 44). This would confirm that consumers were unaware of their decision process. The primary and secondary causes of UIP, namely price and quality respectively (*see* Appendix 23), were among the decision attributes given the most weight.

**Table 44.**

Summary of regression model  $\beta$  and change statistics for post-purchase product attributions and purchase utility.

	R	R <sup>2</sup>	F Change	F Change	Sum of Squares	Mean Square	F	p
Model 1	0.179 <sup>a</sup>	0.032	1.442	0.210	272.546	54.509	1.442	.210 <sup>b</sup>
Residual					8242.984	37.812		
Total					8515.530			

a Dependent Variable: Optimality of Purchases (%)

b Predictors: Constant, Quality of Products, Price of Products, Value of Products, Potential Taste of Products, Hedonism of Products

	Standardised B	t	p
(Constant)		32.995	<b>.000</b>
Quality of Products	0.107	1.173	.242
Price of Products	-0.005	-0.057	.955
Value of Products	0.127	1.056	.292
Potential Taste of Products	-0.046	-0.689	.492
Hedonism of Products	-0.218	-2.311	<b>.022</b>

Finally, unplanned purchases had a significantly negative effect on TUP ( $B = -0.707, p < .001$ ). This effect did not differ between practices ( $CMIN = 5.224, p < .265$ ). This shows that if consumers make unplanned purchases, there is a strong chance that they will further reduce the

overall utility obtained. The effect was particularly strong when experiencing dripped ( $\beta = -0.333$ ) and bundled ( $\beta = -0.295$ ) promotions. It was estimated that unplanned purchases explained approximately 12% of the variance in UTP.

## **6.6 Discussion**

The aims of this investigation were threefold. Firstly, it attempted to bring together the findings presented thus far by creating and testing a hypothetical model of promotional decision-making. The model was tested using SEM and although some refinement is required, it was largely validated. Secondly, as with the findings presented in the preceding chapters, this investigation aimed to bring some cohesion to the scant promotional literature. This was achieved by examining how promotions interact with individual consumer differences to determine purchase outcomes, a relationship that has never been considered before. A number of consumer traits and behaviours were successfully incorporated into the model, which suggested that decision outcomes were the result of many psychological factors. Furthermore, when considering the third aim, testing the between-practice effects on decision utility, the influence of these psychological traits was successfully mediated by the promotional practice. Thus, this chapter validated a model of decision utility that not only highlighted the importance of consumer psychology in decision-making but also how this psychology interacts with promotions to determine a purchase outcome.

### **6.6.1 The Proposed Model**

The validated model of promotional decision utility was created on the basis of Einhorn and Hogarth's (1981) three evaluative phases and the cogno-affective theory (Laroche *et al.*, 2003). As such, the hypothesised model suggests that a consumer's personality and demography will predict how they process information. This processing method will then influence how the consumer evaluates a price. Once the key attribute is evaluated then other factors like brand relationships influence the decision. For the most part this sequence of events was supported thereby providing evidence for both approaches.

Firstly, demography and personality did indeed predict methods of information processing and there were a number of correlations between demographic and personality traits. While these correlations have been reported previously, they were generally not considered in the hypothesised model. Furthermore, a number of traits that were thought to be important were actually removed from

the model, including agreeableness, age, gender and income. While gender, age and income have not been documented to have a substantial effect on information processing, the lack of significance for agreeableness was surprising. Agreeableness has previously been shown to actively increase the likelihood of spontaneous decision-making and should, therefore, predict FII (King and Hicks, 2009). One possible explanation for this lies in the weak overall effect of personality on decision-making which may have led to a non-significant result.

Although the prominent effect of NFC and FII on decision-making supported the importance of cognitive factors in the first step in the decision process, the subsequent sequence of events differed slightly from that predicted. In particular, information processing did not just predict how prices were internalised but also influenced brand affinity. Because promotions are predominantly price-based, the rationale was that price would be the first element to be internalised and evaluated. Following this, it was then expected that other factors, such as brand affinity, would begin to affect decisions. While it could be argued that these findings do not inherently support Einhorn and Hogarth's (1981) model, the fact that information processing predicted price evaluation (IRPs) and the effect of brand affinity on decision utility does support the cogno-affective theory (Laroche *et al.*, 2003). More specifically, the results show that the two cognitive components tested both interacted to predict decision utility and that, at least, part of the cognitive dimensions predicted how brand affections impact the decision process.

A twofold explanation can be proposed for these findings. Firstly, IRP malleability is a by-product of price evaluation and is not representative of price evaluation itself. While the hypothesised model was based on the concept that prices would be evaluated first, thus leading to malleability, this was not actually measured. Furthermore, in most other decision contexts, consumers have been found to base decisions as much on emotive factors as economic ones, thus irrefutably suggesting that both are considered simultaneously. Therefore, it is perfectly logical to suggest that stages two and three merged, creating the scenario observed. It may well have been the case that consumers evaluated the price first, with IRP malleability and brand affinity determining the utility of the decisions thereafter. In retrospect, the addition of a quantitative measure that tested for price consideration may have been useful. Interestingly, the time spent studying the materials would have been a good indication of this, but also in reality this proved to be non-significant. Overall, although the difference between the models was significant, both factors were important in predicting the utility of decisions.

### 6.6.2 Hypothesis Validation

Each hypothesis will now be considered, with the proposed effects of demographics and personality on information processing being examined first. This model originally proposed the testing of a number of traits relevant to consumer decisions, such as income, parenthood and gender, although none of these was found to be significant. However, two traits were found to predict how information is processed, and also had an indirect effect on TUP. Firstly, social class positively predicted FII, suggesting that more affluent consumers consider themselves to be more intuitive decision makers. While only a few studies exist that directly link intuition and social class, there is more evidence for the association between confidence and affluence (Mullainathan and Shafir, 2009). The explanation for this finding may lie in the fact that social class typically equates to higher disposable income; therefore, the potential costs of a decision are lower than for a less affluent consumer meaning that decision intuition and confidence may increase. This theory appears to support the findings presented here.

Somewhat unexpectedly, education had a positive effect on NFC. Typically, social class and education are strongly correlated (Paterson and Iannelli, 2005) and as a result, the behaviours associated with each trait often interrelate. Therefore, it would have been logical to assume that education would exhibit similar results to social class, particularly by negatively predicting NFC. There are two possible explanations for this finding. The first is that educated consumers appear to be more aware and sceptical of price and marketing when purchasing. They have been documented to spend greater time evaluating purchases (Hoon Ang, Sim Cheng, Lim and Kuan Tambyah, 2001) and it may be that they use NFC to ensure the optimal outcomes of their decisions. The second possibility is that the presumed relationship actually represents a crossover effect from the number of inter-predictor correlations.

Personality was a combined component of the first and second hypotheses. The findings showed that, as predicted, four of the five traits directly influenced the method of information processing, in line with previous studies. For instance, neuroticism and conscientiousness can increase anxiety surrounding potential decision losses, thereby encouraging a more cognitive thinking style (Lichtenstein *et al.*, 1990). In contrast, openness to experience and extraversion tend to encourage a more hedonistic type of shopper, who concerns themselves less with potential losses but concentrates more on the gains (Moon, 2016; Rawat and Mann, 2016). Thus, these decisions are defined as more

intuitive. The presented coefficients for these traits in predicting NFC and FII directly support the previous findings.

Unexpectedly, there were no indirect effects of personality on decision utility. This was most likely to be a result of the small effect sizes on the prediction of NFC and FII that did not carry through to the analysis of UIP. However, a number of other reported indirect effects should be considered. For instance, the finding that neuroticism negatively predicts brand affinity supports the findings in *study 2* of **Chapter 5**. Despite the relationship being non-significant in the previous study, the literature does show that neuroticism leads to a lack of trust in the retailer, thus making consumers wary of brand relationships (Fetscherin and Heilmann, 2015). Similarly, extraversion and openness to experience have been attributed to passive (convenience-based) loyalty and price sensitivity. This may explain the indirect effects of these two traits on IRP malleability. Together, these effects not only support the importance of personality in the model, but also confirm the previous findings that were used to construct it.

Financial literacy and experience were considered to be independent and have been shown to be reliable predictors of the way that information is processed, both in the previous literature and in **Chapter 3**. Based on these findings, it was hypothesised that financial literacy and experience would positively predict FII. Research has shown that expert decision-makers use both traits to improve their intuitive decision outcomes (Frey *et al.*, 2015; Glaser and Walther, 2013; Kempf, Erhun, Hertzler, Rosenberg and Peng, 2013). This theory was indeed supported, with both real financial literacy and consumer experience predicting FII. Interestingly, self-reported literacy also had a positive effect on NFC. There are two possible explanations for this observation. Firstly, as the trait was self-reported, it is possible that participants may have had a degree of uncertainty in their actual ability, with those particularly prone to this indicating a higher NFC. However, because the correlation between real and self-reported literacy was strongly positive, this suggestion is unlikely.

Furthermore, potential confounding effects mean that it is difficult to differentiate between the individual effects of the different types of literacy. Therefore, in this study, literacy can only really be seen as a latent trait. An alternative explanation may be that even without experience, financial literacy still encourages consumers to use a cognitive thinking style. It has previously been suggested that consumers can be both intuitive and cognitive, depending on the decision context (Epstein,

Pacini, Denes-Raj and Heier, 1996; Shiloh, Salton and Sharabi, 2002). Similar findings were observed in Chapter 3 where there was a correlation between NFC and FII. Thus, while *hypothesis 3* was supported, the findings also offered a less prescriptive way of considering how information might be processed.

Considering the effects of personality and demographics together, it would seem that few conclusions can be drawn. Firstly, due to the effect of confounding on the observed relationships, it is hard to make inferences about any specific trait. The marginal significance and small coefficients reported further exacerbates this problem. While it is true that all of the traits highlighted by this model have been linked to decision outcomes, it is equally hard to attribute the findings to UIP or TUP as no significant indirect effects were observed. However, significant effects in predicting other factors, such as IRP malleability and brand affinity, were seen. This would suggest that although the effects may be weak, these factors may influence decision utility through a number of other traits. Thus, two things are clear. Firstly, the three hypotheses pertaining to the importance of personality, demography and empowering traits are supported. This is particularly true with regard to the effects of consumer experience and financial literacy on FII. Secondly, although the predicted deal-prone typology did not emerge, some interconnected relationships do warrant further consideration. For instance, it would be valuable to research the direct impact of these traits on the variance for practice-specific UIP and TUP outside the context of a full model.

The method by which consumers process information was predicted to strongly influence the way in which prices are internalised. Moreover, the true extent to which cognitive thinking promotes decision utility has been debated, with recent work finding intuition to be equally effective (Miller and Ireland, 2005). The findings presented here reflect an interesting disparity with previous studies reported in the literature. In contrast to the findings in **Chapter 3** it would appear that cognition can improve decision utility. A search of the literature reveals that this finding is very much supported, with cognition improving decision accuracy, efficiency and outcomes as long as a high level of cognitive load does not result (Miller and Ireland, 2005). One possible explanation for this may lie in the decision task itself. In previous studies, participants had few options to consider and only needed to provide rudimentary purchase intentions, whereas the scenario in this study was very different. Here, the participant was faced with hundreds of stimuli and had to make comparatively complicated, but realistic, decisions. Thus, given the complexity of this decision context it is not unreasonable to

assume that NFC, or cognition, could help to determine utility. Further work will be needed to assess whether intuition can aid decisions in more ecologically valid settings.

Second, it was hypothesised that information processing would predict IRP malleability. As described earlier, NFC had no significant effect, while FII had a positive influence. This can be explained by the observation that consumers who are more intuitive are more likely to disregard the discounted context. In previous studies, FII decreased the likelihood of malleability in light of consumer experience and financial literacy (see **Chapter 4, study 2**). While this interaction was not explicitly observed here, there is ample evidence to support it. For instance, consumer experience and financial literacy (both real and self-reported) had an adverse effect on malleability. It is even plausible that FII combined with these traits may actually hinder malleability. Further testing will be needed to prove this, particularly as the purchase context was again more complicated than in previous studies. In contrast to **Chapter 4**, where the effect of malleability was longitudinal, in this study the delay between exposure and post-price judgements was in minutes rather than days. This may explain the disparity between the studies and provide plausible grounds to account for the slight deviation from the tested hypotheses.

It was anticipated that the second phase of the decision process would be an evaluation of the promotion's price, particularly as promotional attractiveness is predominantly price driven. While this theory was supported to some degree, IRP malleability did not predict the bias associated with brand affinity. It was originally thought that consumers with particularly malleable IRPs would be more likely to rely on emotion-based decision drivers. However, as already noted, IRP malleability does not necessarily reflect the price evaluation process but rather the result. Combined with this limitation, the weak direct effect of malleability on decision utility may explain why brand affinity appeared to have no influence.

IRP malleability did predict decision utility, although there was no effect on UIP and only a negative one on TUP. Therefore, it appears that IRP malleability decreases the utility of unplanned purchases. This unexpected finding does not agree with other research. For instance, many previous studies suggest that in planned purchase scenarios consumers consider in advance the prices that they are willing to pay, they shop around for the best price and they have higher price sensitivity (Gilbride, Inman and Stilley, 2015; Kollat and Willett, 1967). However, in less considered unplanned purchase

scenarios, consumers are more likely to rely on their IRPs to make decisions and if these are malleable, then utility is likely to be affected. Although this explanation has not been directly tested, it is supported by the non-significant effect on UIP observed. Once again, further research is needed.

Brand affinity represents the emotional element of a decision and was hypothesised to be the third and final stage of the evaluation process. Both the hypotheses regarding this dimension were supported. Firstly, as shown in **Chapter 5**, brand affinity consists of brand loyalty, identity and the likelihood of switching. It is likely that many other factors should also be considered as part of this dimension, and this needs to be tested. Secondly, **Chapter 5** indicates that strong brand relationships have the potential to negatively impact decision utility. This finding was seen again here and is widely supported in the consumer behaviour literature. Other authors have suggested that although loyal consumers are price conscious, their trust in the retailer leaves them open to deceit (Fetscherin and Heilmann, 2015). Finally, the adverse effect of NFC on brand affinity was unexpected. Although no previous studies directly support this specific relationship some research suggests that being cognitive, and thinking decisions through properly, can help to mitigate emotion-associated bias (Seo and Barrett, 2007). Such findings may explain this effect but would require further testing.

When these dimensions are considered as a whole, it appears that there is ample evidence to conclude that consumer psychology influences the way in which decisions are made. A consumer's demography, personality, method of price processing and internalisation, combined with a strong brand relationship, may all determine the interaction with promotions at the POS. The effects of each of these factors has been discussed in the previous chapters and have greatly contributed to the novel field of promotional literature. Furthermore, psychology researchers now have a multitude of further avenues to explore. A starting point may be research into how these effects translate to online promotions or other promotional methods.

### **6.6.3 Promotion-specific Effects**

The third aim of this investigation was to ascertain potential differences in decision utility as a function of the 'big four' promotional types. As in the previous chapters a significant effect was found; not only did a majority of the relationships differ between models, but so too did the model itself. This variation was made up of two parts. The first was the effect of a promotion's design on utility. Both the distance required to make a utilitarian purchase and optimal pricing played a



significant role in determining utility. Distance was found to increase the number of unplanned purchases, which in turn had an adverse effect on utility. In a similar vein, more optimal pricing led to an increase in the utility of the outcome. Therefore, designing an easily obtainable promotion, with clearly optimal prices, encourages utility. These findings are supported by previous literature which shows that when perceived distance to the purchase increases, consumers are more likely to purchase irrespective of true cost (Bornemann and Homburg, 2011). Furthermore, when making unplanned purchases, consumers are less likely to shop around and consider other prices, thus accepting the price irrespective of utility (Gilbride *et al.*, 2015). As both of these findings have been validated in **Chapter 5** (see pg. 217), there is a clear indication that decision utility is as much marketing controlled as it is psychological.

The second and most crucial element responsible for differentiating utility was the practices themselves. As each chapter has shown, there is considerable variation in the way in which each promotional method can influence decision outcomes. While this appears logical, no research to date has compared promotions in this way. In common with previous findings, it was expected that drip pricing and bundling would result in the most bias. This is primarily due to the number of price calculations, adjustments and anchors consumers have to engage with to make any one purchase. **Chapters 3, 4 and 5** did indeed show that these two promotional types were responsible for the highest levels of bias. The results of this study also support these findings, showing that drip pricing, bundling and value-based pricing have the greatest effect on bias respectively. One particularly interesting finding was the relatively similar levels of utility, irrespective of price. While these differences were significant, their close proximity suggests that utility was more likely to be a function of the practice and the way it presented the price, rather than whether the price was fair or not. BOGDIF resulted in the least bias, as expected, given the simple calculation needed to assess the promotion's utility. As this investigation considered utility as more than just a function of price itself, it could be concluded that these findings are the most ecologically valid to date.

#### **6.6.4 Limitations, Future Work, Implications and Conclusions**

Despite some promising results that have both supported and expanded the previous research and literature, a study of this nature poses some methodological and statistical challenges. One methodological issue is that the use of a virtual supermarket in an experimental setting raises a number of problems. Firstly, due to the simulation's design, promotional tags were uniform in size. In

a real purchase scenario tags would differ. Therefore, one of the critical determinants of unplanned promotional purchases was limited. Furthermore, in a real setting, numerous promotional types may be experienced in the same environment. However, due to the experimental conditions required to test the model, a comparison involving multiple promotions of the same product would be impractical and lack validity. These limitations both highlight the issues of ecological validity and visibility. Given recent developments in technology, one way to improve this research would be to use virtual reality (VR). VR offers a strong sense of presence in the experimental situation as well as providing a life-size detailed resolution unobtainable from a small screen. This may be a useful approach for future research once resolution limitations have been resolved.

The most important statistical limitations of this study was the sample size and use of bootstrapping. As there were only around 50 participants in each promotional condition, and these were split further by price optimality, the small sample required the use of bootstrapping. While this method has recently gained considerable support, the use of larger and more diverse sample would undoubtedly have been beneficial.

Furthermore, while SEM provides an excellent platform for indicating the direct and indirect effects of relationships, its success hinges on many assumptions. Two of these assumptions were arguably violated and so cast doubt on the findings. First, the ratio between predictor variables and population sample directly affects the calculated coefficients. Some researchers recommend the ratio 1:30 (Lenth, 2001), which would mean that a sample of roughly 350-450 was required to account for the 15 predictors. Not only were the samples used smaller but between groups, the sample was considerably under the 100-participant per condition requirement (Dell, Holleran and Ramakrishnan, 2002). Second, the co-linearity between predictors was a hindrance when making predictions and conclusions from the relationships that were found. This co-linearity is a common problem in path and regression analysis and occurs when independent variables are highly correlated. This correlation influences the estimation of path coefficients and renders them to be less accurate and prone to *type-I* errors. When co-linearity increases, the ability to detect a significant effect is reduced, and the path coefficient becomes less accurate. Strong relationships between independent variables can reduce the predictive power of each variable by increasing the power of the shared portion of the variance. Given the strong correlations between psycho-demographic traits, the individual effects of these traits on promotional utility will need far more significant consideration in future. This will be of vital

importance as the secondary aim was to attest to the effects of these psychological variables on utility. Therefore, the results only served the purpose of predicting not explaining.

A final limitation of this study was that the fit indices of the model indicated a poor or acceptable fit, thereby meaning that the findings are by no means conclusive. Furthermore, the small sample is likely to be linked to the relatively low explanation of variance attributed to UIP, which was less than 30% for all five conditions. While this was still significant, it does limit the applicability of the findings as research typically suggests that a good model is indicated by 40-50% explained variance.

These limitations highlight several important points. Firstly, the small effect sizes for the factors presented in the model may be due to methodological issues. To overcome this, the use of a larger sample size adaptation of the purchase scenario to make it more like a game and the use of real money may have provided more accurate results. For instance, utilising real money for the purchase scenario would increase decision involvement and bring about increasingly considered decisions more akin to those seen in real life. Secondly, since only a small proportion of variance was accounted for, there are clearly many other factors that future models need to consider. In light of the number of possible decision moderators, the observed variance could actually be considered impressive. Other factors that warrant consideration include brand engagement, which is commonly considered to be important in determining decision involvement and active loyalty (where consumers actively chose to be loyal to a brand rather than remaining so out of convenience). The inclusion of these factors into the model would be an interesting avenue for future researchers to explore.

As well as considering additional dimensions, future research should also explore the difference between intentional and unintentional purchasing in more detail. During this investigation, it was important to define and control the purchase scenario in order to compare utility across promotional types. However, as with all purchasing, there is the possibility that unintentional acquisitions were made. While these were accounted for in the model, little thought was given as to how utility may differ across promotions for this type of purchasing. Furthermore, the model did not take into consideration the traits typically viewed as important to this mode of purchasing. Extraversion and openness to experience, for instance, are commonly linked to hedonistic, impulsive

purchasing (Guido, 2006), which is one of the sub-typologies that forms unintentional buying behaviour.

Another useful addition to the presented work would be multiple replications, using new products, prices and purchase conditions. In this investigation, only a small number of grocery items were used and therefore the results do not really apply to other equally routine purchases, such as electronics or clothes. It may be that these types of items demand a slightly more involved type of decision-making, even if they are priced similarly and found in the same location. In addition, the shopping time was limited, which would have dictated the extent to which all of the options were considered. Assessing various time-limited scenarios in combination with different promotional methods and promoted products would add substantial evidence to the findings from the proposed model.

Notwithstanding the extensive work that is still needed, the presented research has significant implications to both the literature and practice. This model is the first of its kind to consider how each promotional practice might affect decision utility. The model adds to the novel field of promotional literature, while also supporting many of the findings in the consumer literature that were used to create it. The originality of this piece of work offers scholars many avenues for further exploration. Furthermore, a model of this nature offers valuable consumer insights that can be utilised to improve decision-making. For instance, it is clear that financial literacy and consumer experience are core components of the ability to evaluate a decision's utility. Obtaining a quick but comprehensive overview of prices for planned purchases is now easier than ever and this will aid in the evaluation process.

Furthermore, although brand loyalty is already on the decline (Dawes, Meyer-Waarden and Driesener, 2015), consumers should be wary of the deals offered by loyalty schemes, as they need to assess the true value of loyalty-based purchasing. Finally, the discovery of substantial amounts of information regarding promotional effectiveness offers retailers a potentially strong advantage. Tactical pricing, which prevents consumers from comparing the prices of the different elements of a promotion, inflates the RRP or simply makes the price more complicated to understand offers the retailer a potential increase in revenue. The precise extent to which this may occur, and the implications of these findings will be discussed in **Chapter 7**.

In conclusion, the purpose of this investigation was to assimilate the research and literature presented to date. The findings revealed that the best promotional decision-makers are cognitive in their thinking style, have more representative and less malleable IRPs, plan their purchases and make fewer impulsive purchases and generally have lower loyalty. Even though the effects were non-significant, good decision-makers appeared to be neurotic, conscientious, financially literate and have considerable consumer experience. The findings provided evidence to support the cogno-affective theory of promotional decision-making (Laroche *et al.*, 2003) and the three evaluative steps important in driving other types of decisions. Additional testing will be needed to validate the importance of these traits further. When considering the importance of promotional practices, the proposed model showed highly significant differences between practices, therefore fulfilling all of the aims of this investigation. Drip pricing and bundling were found to result in the most bias. To summarise, a model of practice-specific decision utility was hypothesised and validated, the importance of psychological factors was endorsed, and clear between-practice effects were proven.



## CHAPTER 7 – THESIS DISCUSSION AND CONCLUSIONS

Everyday consumers are bombarded with countless promotions that entice them to impulsively buy things they have no real need of (Inman and Winer, 1998). Purchasing promoted items in this impromptu fashion often countermands what should be the most important purchasing goal of a consumer - fulfilling inventory needs (Kalymon, 1971). However, there is also substantial evidence to suggest that promotions bias the decision-making process itself – not just the outcome (Foubert and Gijbrecchts, 2007). Recent work has indicated that this bias can vary by price is framed, i.e., offering a 'free' item vs dripping the price. However, as was highlighted in **Chapter 1**, no research had directly compared or evaluated how practices can impact decision-making outcomes. Similarly, there has been no in-depth consideration which psychological traits or behaviours interact to either impede or abed the bias resulting from promotions. This lack of consideration is despite a consumer's psychology playing an essential role in many types of decision-making in the literature and applied contexts (see **Chapter 2**). By considering four of the most common promotions, this thesis aimed to fill these two literary gaps through a series of novel studies which were presented in **Chapters 3-6**.

**Chapter 3** began testing the first of the hypothesised relationships - the processing of information. This also made up the first step in the evaluative process (Einhorn and Hogarth, 1981) and first of the two cognitive components in the cogno-affective theory of promotional decision making (Laroche *et al.*, 2003). The results of chapter three found significant differences in purchase intentions between practices - indicating that each practice was viewed as more or less rewarding by consumers. BOGDIF showed the highest intentions, drip the least. Both NFC and FII predicted purchase intentions, thus supporting their importance in the decision process. Taken together, this chapter clearly showed the importance of intuition and cognition in predicting decision utility. Moreover, the effects varied between practices, with the most bias invoking practices to be bundling, drip pricing, value-based pricing and BOGDIF respectively. All showed greater bias compared to the control.

**Chapter 4** looked at the second stage in the evaluative process (Einhorn and Hogarth, 1981) and second cognitive component in the cogno-affective theory (Larchoe *et al.*, 2003) - the

consideration and cross-choice evaluation of the most critical decision information. *Study 1* considered how IRP malleability could affect price valuations for promoted items when consumers were exposed to sub-par prices. In sum, the studies revealed the importance and bias associated with even simple price processing. The way that consumers process the price is essential in the way it is internalised and has an effect on the outcomes of their decisions. According to results, *study 1* showed Drip, BOGDIF, Value-Based and Bundling to increase IRP malleability respectively. In *study 2*, however, the results almost aligned with the previous chapter, finding drip, bundling, value-based pricing and BOGDIF to increase bias. Since the second study found direct evidence for biased decision-making, the results from this study hold slightly higher weight when determining this chapter's conclusions.

**Chapter 5** went about considering the affective dimension proposed by the cogno-affective theory (Laroche *et al.*, 2003). While any number of other factors could have been considered, there is evidence to suggest that emotional decision drivers such as loyalty are associated with bias and so deserve attention (Avdinli *et al.*, 2014). As such, the purpose of this chapter was to test the importance of brand relationships with two objectives in mind. In *study 1*, the results suggested that biased decisions are highly likely when in ones preferred retail outlet. This alone was shown to increase the bias generated by brand affinity when psychological distance was high. *Study 2* aimed to build upon the findings in study one while also considering how brand affinity and IRP malleability could interact to degrade utility further. Consumer experience and exposure predicted utilitarian choice while IRP malleability and affinity biased purchase intentions. Moreover, the interaction between IRP and affinity had the most significant effect toward predicting biased choice. In sum, it could be concluded that biased decisions were primarily driven by affinity and IRP malleability when items were either drip priced or bundled. While in study one drip pricing and BOGDIF were the most bias invoking in study two it was bundling and value-based pricing.

**Chapter 6** looked at testing a hypothetical model of decision utility for promotions. Using the findings presented in the previous chapters, a model was created that tested all the relationships simultaneously. The findings showed that the two key drivers of biased decisions were quality and price. Interestingly, the actual economic utility of the promotion only accounted for a small proportion of the difference between the total utility for practices. The overall utility achieved stemmed not from the pricing architecture or understanding it but more so from the consumer's psychology.



Furthermore, the hypothetical model was validated, with a few minor expectations. Among these, IRP malleability was not found to predict brand affinity, and impulse purchasing was also shown to be a significant predictor of bias. For each promotional practice, a model was successfully created, the drip pricing model accounting for the most variance (29%). Finally, the results clearly showed that drip pricing and bundling invoked the most overall bias, while value-based pricing and BOGDIF less compared to the control.

Taken together the results across the six chapters showed that promotions increased decision bias above that of the control, therefore, showing the biasing effects of promotions both in general and specific to each practice. Based on the results it would seem that the more complex, monetary-based promotions, e.g., Drip pricing and bundling increased bias the most while value-based and BOGDIF the least. Moreover, in each chapter and the final model, it was consistently shown that a consumer's psychology has the power to either hinder or encourage promotional-based bias. The way consumers process information, evaluate prices and have relationships with retailers seems to be especially important, thereby supporting a number of key theories in the area, including: the cogno-affective theory, the EKB and Einhorn and Horgarths (1981) evaluation triad, bounded rationality and Sinah's (1994) consumer decision model. Based on the findings it seems that the two main aims of this thesis have been fulfilled and the predominant hypothesis building these aims supported. Being the first research to compare practice specific effects on decision utility and the psychological components of these decisions helps classify the findings as novel and original to the promotional literature. The following sections will expand on the findings by further considering their originality to the current literature, the implications to theory and practice and the limitations of the methods employed.

## **7.1 Theoretical and Applied Thesis Originality**

### **7.1.1 Originality to the Promotional/Pricing Literature**

As has been highlighted throughout, the primary purpose of this thesis was to add a considerable body of novel research to the promotional and pricing literature. In so doing it attempted to answer the two main questions of this thesis: 1) do, and which, promotional methods bias decision utility the most and 2) what psychological traits and behaviours moderate the outcomes and process of promotional decision-making. Since these two questions have been answered to date, this thesis was the first to test the effect of promotions on decision outcomes explicitly. This work lent itself to trying to understand which consumer decision models could be applied to promotional contexts, help lend support for the

decision biases driving a practice's effectiveness and help support the notion that their psychology bounds consumer's decisions. However, as well as offering answers to these promotional and decision-based questions, there were also numerous research additions to be made to the broader consumer psychology literature. Among these, the findings extended and validated previous work in the general consumer behaviour literature by considering how traits and behaviours important in other types of purchasing apply to a highly price driven purchase context. Although the literary gaps, and thus the rationale for this thesis were highlighted in **Chapters 1 and 2**, the comparative originality of this thesis is yet to be thoroughly discussed. This shall now be done in respect to the three main literary streams comprising this work: the promotional, the decision and the consumer behaviour literature.

Over the last twenty years, the promotional literature has grown in popularity but still is mostly unexplored by consumer psychologists. This was shown in **Chapter 1** and supported by the fact that only one review and meta-analysis had been conducted on the topic. From this review, it became clear that there were four significant gaps in the literature. The first is simply the number of studies in the area. It is estimated that at the time of writing this discussion that roughly 2976 articles exist worldwide around the theme of promotions, only around 452 explicitly focusing on promotional effectiveness. Comparative, to other research areas of the same age this is small. Consequentially, one of the main issues that emerged was that there was no research directly bringing any of the wider findings together. More specifically, there many studies on how promotions drive sales, which types of promotions are effective and even some that start to indicate the effects of promotions on decision-making. However, these themes are rarely considered together. Moreover, since the number of papers was so small for each sub-category, there was a need to bring the findings together so that research may be used to validate or disprove theories in light of one another. The lack of research also meant that the conclusions presented in these papers were speculative and required further testing. In light of this, the research presented in **Chapters 1 to 6** here greatly helps address a number of issues identified with this research.

First, the present research adds a mixture of both quantitative and qualitative research to the area and provides the basis of ample further investigation. Moreover, it brought together the findings from the latest literature by proposing a model of promotional decision-making that can now guide further research. Most importantly though, for each critical stage in both Einhorn and Hogarth's

(1981) evaluative model, Laroche *et al's.*, (2003) cogno-affective theory there was a validation study to help support the argument. Had only one study on each topic been presented it would have started to address the topic but likely leave even more questions, e.g., are the present findings reliable and valid? This would have defeated the purpose of helping to bring together the literature in the area.

Second, the literature review in **Chapter 1** highlighted that there had been no in-depth exploration of how consumer behaviour could impact promotional purchasing or effectiveness. Most of the work that does exist considers the effect of promotions on behaviour (e.g. how promotions can deteriorate loyalty) rather than the impact of consumer behaviour on promotional purchasing (e.g. loyalty on promotions). Moreover, many of the studies that do consider behaviour focus on explaining purchasing behaviour as a result of biases rather than through, say, how we process the promotional stimuli. For example, in Arora's (2008) bundling study the aim was to consider how bundle formats impacted purchase intent but not why or where the intent originated. Supporting this research gap the review presented in **Chapter 2** and **5** shows that no research has considered how loyalty impacts promotional purchasing.

Only one study (Lowe and Alpert, 2010) has specifically looked at the effect of IRPs on promotional decisions, and only a number have implicated the importance of price processing on promotional outcomes. It was also clear from the review that much of what we think we know about how behaviour could impact promotional decisions is implied or assumed from the wider consumer literature (Ahmetoglu *et al.*, 2014). Consequently, in each chapter of this thesis, the suggested research was presented and then tested to provided support for the effect of that behaviour on promotional purchasing. While true that many of the findings aligned with what was expected from other decision contexts, it was useful to have some empirical evidence to support these relationships in the area. In this sense, the research was original in that it explored these assumptions in a context yet unfamiliar and was additive in that it directly extended many of the wider behavioural assumptions surrounding consumer behaviours. From this ample further research can now be conducted.

Third, although the impact of price frames and promotions on decisions is frequently discussed, there is no work explicitly considering how decision utility is implicated. For instance, it was shown many times that consumers end up paying more or the same as a result of the promotional

frame (Shampanier and Ariely, 2006). Thus, these papers argue that promotions are useful in generating sale as a result of their architecture. However, these studies are critiqued in that they focus on the price being the sole driver of utility. For instance, to say that the costlier decision was biased because it lacked value for money suggests that utility is driven only by monetary savings. In fact, it could be that convenience was as essential and that the consumer was happy to pay more for the ability to buy everything together. These small differences in understanding why and how a decision is made are fundamental to understanding purchasing behaviour.

With all the studies to date taking the pricing approach this thesis adds and extends the findings by considering a plethora of factors. While price was indeed assumed to be the primary decision driver many others were also indicated as necessary. In light of this, **Chapter 6** was the first attempt to explicitly consider how promotions affect decision utility when accounting for a range of decision factors. By doing so, it provided evidence for the importance of price while also highlighting that many other factors played a role in the decision outcome. This adds to promotional literature which was yet to explore how other factors such as quality, nutrition or inventory affected a decision. It also lent credence to the importance of considering factors from the wider consumer literature where typically ill-considered attributes like exclusivity, quality or convenience play a role (Andrews *et al.*, 2000).

Finally, within the promotional literature, there is a lack of understanding as to which promotional practices are the most bias invoking. A core aim of much of the pricing literature is for it to be used practically and yet understanding the differing effects between practices is vital to retailer strategy and designing fair pricing policies. While the potential bias of individual methods has been strongly supported, it is a surprise that no studies have cross-compared practices. That said, many papers compare the effects of more general promotional types, e.g., discounting vs premium. These studies showed that although the premium promotions were preferred, monetary promotions had the most significant potential to bias decisions. Despite the consistent validity of these findings, researchers hadn't explored how or which practices have a particularly acute effect. Consequentially, this thesis was the first attempt to do so in the context of the four most researched but also well-used promotions.

Directly comparing practices in this manner added to the literature in two ways. First, the comparison lent support to the research associated with each practice. It supported the impact of the price frame on purchase intent (e.g., bundles were accepted even if offering no value) and went on to provide a stronger rationale for why this might be the case. For example, in previous studies findings like this were put down to common decision biases, e.g. anchoring despite there being no evidence to suggest this explanation was valid. However, using a comparative approach, where each practice's effectiveness fundamentally differed in terms of their sales efficacy, provided a more robust rationale to discuss these causes. For instance, one core finding was that bias largely hinged on the complexity and number of calculations needed in the decision. By using promotions that varied in complexity the conclusion that consumers anchor and fail to adjust accurately in drip pricing is more supported than if the practice had been investigated by itself.

Second, the comparative nature of this research fulfilled the call for research in this area from both previous scholars and policymakers. For example, the review by Ahmetoglu *et al.*, (2014) called for more research considering how behaviours impact practice-specific purchase intentions. It also commented on the need for practice-specific work to improve fair pricing practices. To improve policy and empower consumer decisions some solid theoretical base surrounding promotions is however needed. This was partly accomplished by the previous work which highlighted the biases consumers could experience for each practice. Yet, the research presented here built on this and showed which specific methods are the most cause for concern and why. This significantly adds to the current literature by finally creating a behavioural model that was significant across practices and could be used to both improve policy but open avenues for a plethora of behavioural work in the area.

### **7.1.2 Originality to the Consumer Decision Literature**

As was highlighted throughout the chapters, many of the assumptions made about consumer behaviour and promotions came from the wider decision and consumer research. Both of these research streams are indisputably well established and describe a number of models and theories that could hypothesise how behaviour impacts promotional decisions. Considering the decision literature first, a number of steps and processes were described to show how consumers make decisions and obtain utility. While these theories have been well validated there are few graphic models depicting the factors necessary to securing utility, even less so applied to the promotional context of interest. In

fact, almost all the models reviewed illustrate how a purchase is made rather than their impact on the outcome.

The research presented in all the chapters addresses these gaps in three ways. First, it used a quantifiable way to assess utility which was then incorporated into a graphic model alongside the vital decision factors cited as influential in similar research. This approach not only lent support to the importance of psycho-demographics, processing and emotive factors in the model but went further by specifying exactly which elements were effectual in light of one another. This is particularly additive to the literature as consumer behaviours work in concert in real-life purchasing scenarios, not individually.

Second, the model provided a glimpse into how and why the decision literature should be more widely applied to promotions. To date, scholars have used decision theory to explain why promotions are effective at driving sales but not conducted much quantifiable work to establish how or why this is the case. While there have been some studies looking at the importance of the factors critical to decision making, e.g. consumer personality, to understanding decision-making as a whole these factors need to be considered together. Consequentially, this research provided a novel approach to trying to describe the decision process, moderation factors and outcomes obtainable in a context yet unexplored.

Finally, bridging the gap between consumer and decision theory, the model validates and extends the traditional models of consumer decision-making. For example, it shows the importance and ability of the WAM approach to assess utility in experimental contexts. It also indicates that promotional decisions are not just price driven and are primarily constructive. Moreover, the devised equation of decision utility helps extend our understanding of the aspects important in obtaining utility for promotional purchases. It also highlights what needs to be done to develop our understanding of the consumer decision process further. This is discussed later in this chapter. However, perhaps the most additive element to the literature that this research provides is an understanding of truly how biases decision can be. More specifically, the research showed that consumers are never 100% utilitarian either due to a variety of psychological factors. Due to the consistent nature of this finding throughout the chapters, this research adds significantly to our understanding of what a 'satisfactory' decision may look like. In particular, the final model (see

**Chapter 6**, page 230) presented adds a whole new avenue for exploration on the decision space surrounding how we interact with promotions and the outcomes.

### 7.1.3 Originality to the Consumer Psychology Literature

A vital foundation of the decision model presented in **Chapter 6** was the importance of a consumer's psychology and behaviour in predicting decision outcomes. To date, the consumer literature has helped understand promotional purchasing by identifying a 'deal proneness' trait. However, while there is an abundance of trait-based literature few studies consider how deal proneness directly impacts the decision process and what that means for decision outcomes. In addition to this gap, the consumer literature proposes a variety of behavioural models that describe purchasing intent Laroche *et al.*, (2003) also proposed that promotional decisions are driven by two cognitive elements (information processing and information evaluation) and an affective dimension (e.g., brand relationships). This forms the basis of their cogno-affective theory and, although offering an interesting perspective on promotional decision-making, currently lacks ecological validity and a practice-specific focus.

The research presented across **Chapters 1-6** help address these gaps in multiple ways. First, in each chapter the effect of consumer personality and demography on decision utility were considered. The purpose of this was to assess if a deal-prone profile emerged that was both synonymous to the previous literature and could predict utility. Despite one not appearing, a number of traits were cited as critical to driving promotional purchasing. This helps extend the deal-prone literature by applying it more relevant promotions used today and providing insight as to how the profile may have evolved. Second, using the core behavioural models to describe purchasing proposed by the literature, this research validates and extends the research findings of past scholars. In particular, it shows that core consumer theories such as the importance of brand relationships in purchasing are valid to multiple contexts, even relatively unexplored ones. The purpose of all psychological research is to attempt to make conclusions that are valid throughout a literary stream and so providing support for these theories (e.g., Einhorn and Hogarth, 1981; Laroche *et al.*, 2003) is additive. Third, although the majority of chapters used a survey design like the consumer research the addition of an experimental design was vital in helping further develop the literature. A particular problem that many scholars cite when discussing consumer research is that the survey design does not reflect the in-store environment. Consequentially, by incorporating the virtual supermarket in a

context yet to be explored the model adds a significant ecologically valid series of findings of this research. It also encourages the research to begin using more simulation style approaches which mimic the real retail environment as closely as possible.

In sum, this thesis has broad implications for the decision, consumer and promotional literature. While being original in that it extended many of the findings to the yet unexplored promotional context it also served as a useful tool in highlighting how traditional psychological and decision theories can apply to unexplored areas like this. Since many of the model's hypotheses were initially based on assumptions from these three fields, the fact that many of psychological factors important in influencing other types of decisions were significant serves as a highly useful for future work. In particular, it shows that basing research off assumptions alone can be valid and so future work can do the same. By using a combination of research designs in any one context, the hope is that future work will attempt to use similar approaches to appease the critics of the field and provide more ecologically sound results. Furthermore, the support for theories like the cogno-affective allows for scholars to further test and apply the model across a variety of other promotional types. In conclusion, the findings presented here offer a new way of thinking about promotions, behaviours and decisions to the literature which was unexplored until now.

## **7.2 Theoretical Implications of Findings**

One crucial aim of this thesis was to lend support to the previous literature by reconfirming and extending the findings. The implications of the results shall now be discussed. First, consideration will be given to how the findings across the chapters impact the decision literature by focusing on the implications to our understanding of rationality and the models describing the purchase process. Next, a consideration will be given to how the findings support the previous theories of consumer behaviour (e.g., how our emotion-driven behaviours affect our decisions and their outcomes), before finally considering how the results support theories in the pricing domain.

### **7.2.1 Decision-Making Literature**

#### **Definitions of utility and decisions**

A central premise in decision-making is that consumers can obtain 'satisfactory' but not rational decision outcomes (Simon, 1978). Despite this notion, there was no evidence here that consumers could



obtain 100% utilitarian, or 'satisfactory', decisions. Furthermore, none of the results showed that consumers directly purchased in line with their goals. Even when explicitly told the composition of a utilitarian choice, bias was still as prominent. However, it is not clear if the bias indicated means that it is prudent to reject the bounded approach. For example, a key stipulation of the bounded theory is that utility is defined by a) the choice set; and b) the cognitive limitations (Simon, 1978).

While the final model (*see Chapter 6*) shows consumer behaviour to moderate promotional decision bias, the variance explained by these behaviours does not provide conclusive proof that psychological predispositions have bounded consumer's decisions. It may simply be that other psychological factors need to be added to the model, thus adding variance and supporting the bounded argument further. However, it may equally be that consumers are not able to attain a utilitarian decision due to other factors or that our understanding of decision utility is skewed by self-report. For example, measuring utilitarian decisions hinges on defining and assessing purchases by the individualistic importance of product attributes. Should the participant be unable to report the attributes important to their decisions accurately then measuring utility and finding support for the bounded approach becomes difficult.

The true extent to which consumers know their preferences is and always has been unclear (Alba and Hutchinson, 2000). For example, Riquelme (2001) suggests that decision preferences fluctuate contextually and over time. This is a problem as our understanding of utility is strongly tied to self-reporting those preferences. However, Riquelme (2001) also suggest that despite varying contextually consumers do know their preferences for items they experience regularly. Should preference be indeed known and reliable, the evidence here could suggest that consumers can make utilitarian decisions so far as their predispositions bound them. However, it is also plausible that the results are not due to being bounded but merely the result of inertia. The low variance explained by the psychological factors could arguably support this. If true, consumers could be described as accepting promotions irrespective of utility and purchase because of the perceivably high probability of obtaining VFM. While technically this rationale describes a heuristical effect, and thus a cognitive bias, a consumer with the ability but a lack of motivation to get a good deal may not inherently be classified as bounded by their abilities. Only further work will help assess if this notion holds valid.

In sum, it is logical to conclude two things. Firstly, there is irrefutable support that consumer decision-making is biased. This goes against the traditional economic view that decision-makers are rational. Second, there is quantitative evidence to suggest that their cognitive predispositions bound a consumer's choice. This aligns with Simon's (1991) theory of bounded rationality. However, even in cases where the choice set was small, and utility defined, consumers were still biased which raises questions as to the extent that promotional decisions are bounded as opposed to ill-considered.

### **Three-step decision evaluation process and the cognitive models of consumer decision-making**

Scholars typically try to understand how purchase decisions are made via two sources. The first is the three-step decision evaluation process described by Einhorn and Hogarth (1981), while the second is via the classical models of consumer decision-making (e.g., WAM, lexographic etc.). Concerning the former, there was quantitative and qualitative evidence to support the validity of the proposed three-step process. The model presented in **Chapter 6** clearly illustrates that consumer personality and demography predict how we process information. The processing methodology went on to predict how the various elements of a promotional decision informed the decision outcome.

However, despite supporting Einhorn and Hogarth's (1981) proposed model the findings in **Chapter 6** did not provide conclusive evidence. The SEM, for instance, showed that IRPs did not impact the effect of brand loyalty on decision outcomes. Therefore, from a quantitative perspective therefore only the first step in the process was supported. A primary reason for this likely originates from the methodological design which did not directly consider how or why a price was evaluated but instead looked at the outcome of evaluating it (the IRP). Having done so may have provided more concrete support to the hypothesis that the central factor in a decision is considered first before others. **Chapter 6** did support the importance of price as an individual decision driver, with it being shown to be the critical decision factor for purchasing. This aligns with the literature (see Blattberg, Briesch and Fox, 1995). Ironically, it was also the factor that yielded the most bias which would suggest that despite being the core decision factor first processed, the price was the least evaluated. This is a notion that merits further exploration.

Concerning the proposed models of consumer decision-making, a few conclusions can be made. First, the findings support a constructivist approach (Bettman *et al.*, 1991). Despite participants quickly indicating the factors relevant to their decisions, especially in chapter 6, the bias associated with

each choice was the result of a different composition of ill-considered traits. Consequentially, these results indicate that consumers consider different product attributes in practice, thereby constructing their decision process in light of the context and choice set. Furthermore, if participants had made decisions in the same manner across the product choice sets one would have expected to see only a small difference in the factors promoting utility. Since the biasing factors were those attributes said to be the most important in the decision, it can be further argued that, despite intentions, the actual drivers of a decision are constructed at the point of sale (POS).

Second, although it is difficult to validate or reject the proposed models of decision-making outright, there is ample evidence to support the approaches that are alternative-based rather than attribute-based. The alternative-based approaches (i.e. WAM, satisficing and the equal weight model) suggest that multiple attributes are considered at any one time in a decision (Kahneman and Tversky, 1982). However, throughout this thesis it was shown that multiple factors influence a decision – a notion made especially prominent in **Chapter 6**. Not only did consumers directly indicate that up to eight factors would be considered in any one decision but a multitude of product features also accounted for both the bias and utility of decisions. Moreover, even in experimental contexts where the critical price decision driver was controlled for (e.g. **Chapter 5**), the variance in the decisions was not adequately accounted for. This provides evidence to suggest that decisions are not made from one factor alone. In light on these findings, the lexographic and elimination by aspects model could arguably be rejected. Within the alternative-based approaches, the findings in **Chapter 6** also support the rejection of the equal weight model. Each participant was clearly shown to actively weight decision factors differently across the chapters, while **Chapter 6** showed that each factor accounts for a different weight in the decision outcome. The results thereby disprove Dawes' (1979) model, which proposes product attributes to be assigned equal importance. This, therefore, leaves the WAM and satisficing models to consider.

Accepting the WAM approach would, by definition, mean that each option a choice set was considered equally, with no cut-offs determining the viability of choice. Based upon the findings presented in **Chapters 1-6**, it is unlikely that all choices are considered equally, although further evidence will be needed to substantiate this claim. Furthermore, the WAM claims that decisions are extensive – a notion that invariably differs between consumers and purchase contexts. For example, the degree to which product attributes are considered varied by consumer experience and financial literacy, thereby rendering a decision as difficult or easy based upon the consumer predispositions. This aligns

with the argument that extensive decisions are bounded by the decision maker's predispositions (Simon, 1991), which therefore also makes it difficult to compare and generalise how the WAM unilaterally applies to decision making. With all the chapters highlighting that promotional decision-making is a highly individualistic behaviour, a combined WAM and constructivist approach seems the most valid in explaining the decision process observed.

Although there is no conclusive evidence to support one model, the satisficing approach claims that choices are order-dependent. However, recent research shows that although consumers may fixate on one product first, they are not likely to reject it before considering other products in the choice set (Shih, 2012). If valid, this would render considering the satisficing approach moot. While the findings cannot directly establish the validity of the WAM approach, the use of the WAM approach was invaluable in actually measuring utility. Since similar findings were observed across studies using the same WAM methodology, there is evidence to suggest that there is some merit in using the fundamentals of this approach. It could, therefore, be concluded that the modified approach used may hold validity over the other models, although further work is needed.

## **7.2.2 Consumer Behaviour**

### **Overall importance to promotional purchasing**

One of the primary research goals of this thesis was to uncover how a consumer's psychology moderates promotional purchasing and the outcomes of the decisions made. To date, the only research considering this has focused on 'deal proneness' – the typology of those keen to purchase with promotions (Rao, 2009). While this research has highlighted which consumers might be prone to promotional-based bias and why, it did not consider the implications of the wider psychological literature, e.g. consumer cognition, memory or emotion (Ahmetoglu *et al.*, 2014).

The research presented in each chapter sought to use findings from the wider consumer literature to make predictions about how these psychological factors could influence decision outcomes. While each psychological factor accounted for its unique variance in the resultant decision model (*see Chapter 6*), the results showed the importance of these factors in promotional decisions. Moreover, each psychological dimension was found to successfully and differently moderate the effect of promotional practices on decisions. Consequentially, consumer psychology strongly influences how

promotions are engaged with and the utility obtained from the decision. The array of findings directly helps to validate a number of critical theories in the area, whilst providing support and direction for future work for others.

Among the psychological theories underlying the model presented in **Chapter 6**, none is more prominent than the cogno-affective theory. The findings across **Chapters 2-6** provide substantial evidence for the cogno-affective theory of promotional decision making which suggests that promotional decisions are made up of three dimensions - two cognitive (i.e., information processing and evaluation) and one affective (i.e., brand relationships). In **Chapter 2**, where the theory was identified, the qualitative data showed ample support for the notion that there are both cognitive and affective elements to promotional purchasing. For example, it was noted that the way information is processed, and prices engaged with strongly determines how, if and when promotions are purchased. This notion was supported in **Chapters 3 and 4**, where the information processing style and price internalisation process strongly impacted purchase intent and decision utility. Furthermore, the interviewees, whether academic, marketing or strategic experts, also confirmed that brand loyalty strongly influenced how consumers engage with promotions. This was supported in chapter 5 where brand affinity strongly predicted decision bias. Based on these findings there is ample support for each of three components making up the cogno-affective theory.

Concerning the relationship between each of the theory's components, the results are more apparent than for Einhorn and Hogarth's (1981) decision evaluation process. **Chapters 3-5** support the proposed components and outcomes of the theory outright, while **Chapter 6** offers support that is less conclusive. More specifically, **Chapter 4** found an active link between how information is processed and how prices are evaluated and internalised. A link between these two cognitive aspects was also identified in the final model in **Chapter 6**, although this was slightly less concrete, with only intuition predicting IRP malleability. Once again, the dimensions used, especially IRP malleability, do not entirely represent how information is processed and evaluated. This could be argued as a limitation of testing this theory as will be discussed shortly. However, given that IRP malleability is still a cognitive process there does seem to be support for two cognitive components in predicting promotional decisions.

Finally, concerning the affective dimension, **Chapter 5** finds a strong relationship between brand affinity and price evaluations in predicting purchase intent and decision utility. While the relationship between IRP malleability and brand affinity were not exclusively identified in the final model, a relationship between NFC and brand affinity was found. Although this was not hypothesised, there is still an evidential link between the cognitive and affective elements in a decision. Since relationships between the two cogno-affective components were observed across chapters, it would seem that there is enough support for the theory to conduct ample further investigation. The potential significance of the theory also provides an excellent rationale to explain the findings.

### **Personality and Demographics**

Underlying all decision-making is the notion that a person's demography and personality predetermines how they make decisions. The same is equally applicable to consumer decisions with a plethora of work finding consumer typologies that predict purchasing behaviour (Kwon and Kwon, 2013). In the context of promotions, this is also one of the few areas explored. It found middle-aged mothers with relatively good education, household income and social class to be particularly prone to promotional consumption (Lichtenstein *et al.*, 1997). While typologies like this invariably differ contextually and geographically, their formation helps us to understand how individual traits play a role in behaviour. In a promotional setting, gender, age, social and generational factors have been proposed to play a role in determining promotional consumption (Pechtl, 2004).

Only a few of the demographic factors played a significant role in determining the practice-specific bias found. There are two likely explanations for this. First, demographic traits have notoriously small and variable effect sizes in statistical models (Dotson, 2001). This is especially true when models incorporate complex dimensions that are predicted by demography and end up accounting for the majority variance. The second explanation is that the samples used were not representative enough of the wider population. Londoners are both more affluent, marry later and have different social priorities than the rest of the UK (Glaeser, Kolko and Saiz, 2001). As a result, they reflect a unique consumer group who are thought to be less inclined to confine to the traditional gender or age stereotypes. For example, a paper by Gillenson and Sherrell, 2002 indicated that urban dwellers are thought to be technologically astute and have higher disposable income. These traits could easily translate into promotional purchasing whereby promotions are not a necessity but rather a luxury when buying goods. In light of this, it seems prudent to conclude that one reason for the weak effect of demography is that

the sample was not diverse enough either within the UK or translatable enough across similar nations. This is an issue raised in the upcoming future work section (*see* page 308).

Although deal proneness constitutes a number of demographic traits, scholars in the area consider it a personality-type attribute (Lichtenstein *et al.*, 1993). While there was no direct evidence to support the typology of ‘deal proneness’, there was strong evidence suggesting that other personality traits did predict promotional purchasing. In particular, four of the ‘big five’ were found to predict bias in the final model, as was discussed in **Chapter 6**. Early in **Chapter 2**, the literature surrounding personality and promotions was touched upon. In particular, there was a plethora of literature that indicated that conscientiousness and neuroticism aided utility (Cheng and Furnham, 2014). Others suggested that extraversion, openness and agreeableness increase hedonistic purchasing and thus bias (Narendran, 2013). While in the earlier chapters the findings directly supported some of these previously found relationships, **Chapter 6** was less conclusive. In particular, the covariance between personality and demography, combined with the effect on cognition, rendered direct effects on decision utility non-significant. Despite this, four of the traits remained significant in the earlier phases of the model. When combined with the few but unique relationships in **Chapters 3-5**, the validity of including the big five in the model was valid. Far from being conclusive, especially since only one trait was significant in each of the early chapters, further work will be needed to validate how personality predicts promotional-based purchasing.

### **Information Processing and Consumer Decision Making**

A central component of decision-making, and indeed the first step in Einhorn and Hogarth’s (1981) proposed model, was that the method of information processing is vital in determining decision outcomes. While ELM theory is the traditional approach in the area, this model applied dual process theory to promotional decision-making. Being a theory that was yet to be explored in the promotional domain, **Chapters 3 and 6** strongly validated the applicability of the dual process model in this context. At the most overarching level, this finding provides conclusive support for applying dual process model to the promotional space.

Two central components of the final model were intuition and cognition. The former was described by Pretz and Totz (2007) to be the central processing method for impulsive decisions that often lead to biased decisions. As was shown in **Chapters 3 and 6**, the positive effects of cognition on decision utility is both debatable and subject to a number of conditions. For instance, financial literacy

and consumer experience were shown across three studies to improve decision utility for intuitive decisions above that of cognitive ones. The reason for this was thought to be cognitive load - which the newer literature suggests profoundly limits consumers' cognitive decision abilities when there are more than nine items in a choice set (Petty *et al.*, 2009).

While in promotional contexts there are typically few items in any one promotional offering, the tendency to accept promotions because of strong discount-value heuristics makes these decisions intuitive. Although by definition cognition should therefore not be limited by load and thus improve decisions, there are many other factors to be considered. First, the complexity of some promotions causes load and bias in and of themselves, e.g. drip pricing. Others rely on IRPs and cause overload not from the environment but from trying to evaluate if a price is fair, e.g. the individual items in a bundle (Deck and Jahedi, 2015). While there is a debate as to how cognition or intuition affect decision outcomes, the evidence provided here aligns with the most recent literature. More testing is needed to substantiate these conclusions in light of the unexplored promotional context.

Finally, to understand how information processing impacts promotional decisions, it was essential to consider two elements. First were the measurement instruments used to assess intuition and cognition. Although there are many ways of assessing the two, the literature has previously used the measures of faith in intuition (FII) and need for cognition (NFC) (Norris, Pacini and Epstein, 1998). The advantage of these two measures is that they reflect the overall desire and propensity for a processing type across contexts (Sirgy *et al.*, 2015). Since the aim of this thesis was to test cognition and intuition across different practices, these seemed fitting. The findings showed strong reliability for the two measures which align with Norris *et al.*'s, (1998) findings that the scales adequately reflect cognitive and intuitive modes of processing.

Second, the interaction between intuition/cognition with other psychological behaviours can be equally compelling in predicting decision outcomes. For instance, King and Hicks's (2009) showed that intuition could influence how prices are internalised and later used in the decision process. This was directly found and supported in both **Chapters 4 and 6**. However, **Chapter 6** revealed that aside from the hypotheses made in this thesis, dual process models can predict a vast variety of other behavioural dimensions. The direct effect of NFC on brand affinity was a testament to this and leaves further room



for exploration. There could be a variety of other dimensions that are moderators of the effect of information processing on decision outcomes.

### **Internal Reference Prices (IRPs)**

According to the cogno-affective theory (Laroche *et al.*, 2003), the extent to which consumers engage with prices is a vital determinant of promotional decisions. This thesis decided to focus on more than just how consumers engage with prices but what happens when they do. The rationale for considering IRPs came from a number of studies that showed that after lengthy promotions, consumers internalise and start to expect discounted prices (Lowe and Alpert, 2010). This fundamental shift in expectations caused RRP to be viewed as expensive via more profound ‘sticker shocks’. While there is a considerable body of pricing literature looking at internalised prices, including how they are formed and used, this research was only applied twice to the promotional literature.

In manipulating the internal prices consumers hold for products, Lowe and Alpert (2004) were the first to show that promotions can manipulate IRPs. Furthermore, if consumers used these manipulated prices in their decisions, they would be inherently biased. While their research focused on new products, the findings from **Chapters 4 and 6** considered the impact of IRPs on already established brands. Moreover, it sought to extend the current research by showing not only that IRPs are highly malleable after even simple exposure but that the price framing method had a significant effect. In all three studies, there was conclusive evidence to support both of these research aims.

First, although there were fluctuations in the price judgments for those not exposed to manipulated prices, in both study one and two (**Chapter 5**), these did not exceed the 5% threshold proposed by Estelami and De Maeyer (2004). However, for those in the exposure condition, the significant shift in price valuations highlighted two things. First, it confirmed that IRPs are highly malleable and updated based on the most recent price exposure - thereby disproving the theory suggesting that prices are stable over time (e.g. Wedell, 1995; Monroe, 1990). Second, it showed that even after quick and straightforward exposure, the IRP was affected and subsequently used in later decisions. This runs counter to Sinha and Smith’s (2000) argument that this only occurs after lengthy promotions. The argument also proposed that malleability be only acute for certain types of promotions, e.g. reference pricing, while others, e.g. BOGOF, had little effect. Since each practice had its own significant effect on malleability over the control, this notion was disproven. Consequentially, the

findings provide support for Estelami and De Maeyer's (2004) argument that IRPs are easily manipulated by promotions and can cause a detrimental effect on subsequent decisions.

A final aspect of the IRP literature to consider is evidence supporting the debate on how IRPs develop and evolve. As was highlighted in **Chapter 4**, prototype theorists propose that a single value is extracted from a range of similar purchases (Kinard, Capella, and Bonner, 2013; Laroche, Kalamas, and Renard, 2015). The IRP can update as the average changes but fundamentally relies on a single price. In situations where an average cannot be created, Lowe and Alpert (2010) suggest that consumers assimilate the prices of similar products to create an average 'fair' price. While the findings from the present studies do not inherently provide evidence to disregard these theories, they do seem to weigh more in favour of an exemplar approach. The exemplar model proposed that reference prices cover a range of potentially acceptable prices based on previous experience (e.g., Janiszewski and Lichtenstein, 1999; Kalyanaram and Little, 1994; Lichtenstein and Bearden, 1989; Monroe, 1971). These models suggest that because consumers store, retrieve, and use a rich array of price information contextually, there cannot be a single summary price.

Two key findings help to support exemplar theory over the prototype approach. First, in **Chapter 6** the malleability of IRPs varied across the promotional practices for the same products pre- and post-purchasing. If there was an average summary price, participants would not have shown such significant differences in price valuations post-purchasing. Moreover, all participants were shown the same choice set from which they would have been able to create a similar average had they looked at the other product prices on the shelf. Since the post-purchase price valuations differed within the same experimental condition and between groups, it is logical to suggest that there was a contextual component involved. Because of the between-subjects' promotional condition, there is no proof to suggest that the findings were not simply the result of individual differences. Second, if there was a stable summary price, then there should not have been variance in price judgements for those in the non-exposure control condition. The fact that differences were observed in **Chapter 4** suggests that IRPs are not necessarily averages but perhaps vary due to variances in an individual's information recall ability. In contrast, it could be debated that during the time lapse control, participants encountered the real-world versions of those products, thus adjusting or averaging their IRP for this product group. In sum, while the evidence seems to support the exemplar approach, as similar and more recent studies in

the area have done (e.g., Estelami and Lehmann, 2001), these limitations mean that more research will be needed to reject or support either model conclusively.

### **Brand Relationships and their Impact on Promotional Decisions**

Of the variety of factors that could have been considered in the third stage of Einhorn and Hogarth's (1981) proposed model of decision evaluation, brand relationships seemed the aptest. One reason for this is that there is a plethora of work considering how relationships impact consumer decisions. A second is that Laroche *et al.*, (2003) explicitly state that there is a robust affective dimension in their cogno-affective theory describing promotional decision-making. Of particular interest was the consistent finding that strong relationships lead to less searching and higher brand trust (Sirdeshmukh, Singh and Sabol, 2002). As a result, consumers were found to easily fall prone to marketing ploys (Bergkvist and Bech-Larsen, 2010). In both **Chapters 5 and 6**, this effect was repeatedly validated, with brand relationships accounting for the most variance in the decision bias. Given the strength and direct impact on decision bias, this previous research can thus be classified as applicable to promotional contexts.

Further to the direct impact to decision utility, there was also a rationale for describing brand relationships via a single dimension. In previous works, brand relationships have also been described as brand 'love' (Batra *et al.*, 2012) or 'affinity' (Bloxham, 1998). In recent years, these single-dimension constructs seem to have gained popularity in the literature and typically consist of a number of factors ranging from brand loyalty to engagement. Since there is no universally valid measure of brand 'love', this thesis aimed to develop the term brand affinity further. Doing so involved attempting to factor together the three core dimensions of brand relationships (loyalty, identification and switching) using validated scales. The findings in **Chapters 5 and 6** validated a robust single dimension with a good proportion of variance accounted for. While there is ample room to develop our understanding of affinity further, the significance of the dimension supports the initial factors used by Bloxham (1998) to describe the term. Therefore, while the creation of the dimension was not the central aim of **Chapter 5**, it did provide good support for the initial work. Moreover, it provided a single dimension that could be used to test the effect of brand relationships on practice-specific decision-making.

Considering promotional practices, the literature looking at promotions and loyalty together showed both to create lower price expectations and price wars. As a result, switching increases while

loyalty decreases (Inman, McAlister and Hoyer, 1990). However, there was also the finding that loyal consumers expect rewards for their loyalty. Some scholars have therefore begun to argue that promotional consumption for a brand or retailer is exceptionally high for more loyal consumers (Pauwels, Hanssens and Siddarth, 2002). By being rewarded with special promotions, loyalty is further built, and trust developed. In turn, this reduces searching and comprehensive deal evaluations. Should consumers fail to evaluate deals properly, the obtainable utility is entirely at the mercy of the marketer and the fairness of the presented price. This notion is substantially supported in **Chapters 5 and 6**, where brand affinity was found to predict promotional-based bias significantly. Moreover, practice-specific effects were observed throughout, with strong brand affinity being shown to further exasperate bias already stemming from other sources, e.g. malleable IRPs.

### **7.2.3 Pricing and Promotion Literature**

The final research stream central to this thesis was the promotional literature. As has been highlighted throughout, this literary stream has only recently gained popularity. Consequentially, the lack of literature left a number of fundamental research gaps to consider. Among these was the impact of promotions and practice-specific differences on decision outcomes and the influence of psychology on the effects found. Across all the chapters where promotions were found to bias decisions, there were evident practice-specific effects, and consumer psychology moderated these relationships. In essence, the principal aims were supported. However, many of the hypotheses tested were based on the wider literature and as such could be considered novel. While the findings, therefore, have positive implications for the novel studies in this area, it has far wider implications to the promotional domain as a whole. The implications of the findings on the three most researched areas in the promotional space shall now be considered. These areas concern the architecture and underlying principles governing promotional effectiveness, the power of the price driver and practice-specific effects to purchasing and behaviour.

#### **Evidence for the biases underlying promotional effectiveness/decisions**

One of the fundamental reasons for hypothesising practice-specific effects on decision-making was the underlying biases shown to make promotions so effective at increasing sales. Across the thesis, the decision biases discussed in **Chapter 1** were discussed and indicated to be detrimental to decision-making. Despite this evidence, there remains no clear evidence to clearly say whether one practice is more bias-invoking than another due to these factors.

First, the influence of the price/promotion value heuristics was supported throughout. This was indicated where consumers bought a more expensive priced promotion based on nothing but the perception that the promotion offered value. In **Chapter 5**, the effect was made especially evident when 80% of the participants decided to make a biased decision based on price alone. Since the price was dictated as being the sole deciding factor and switching costs were both low and non-monetary, it stands to reason that the bias is heuristic-based. While it is possible that the cost (time delay) outweighed the benefit (monetary gain), the potential monetary prize for utilitarian answers should have rendered this experimental bias moot. Therefore, it could be argued that the promotion-value heuristic was to blame for the high bias seen in decisions.

Second, the presence of an anchoring and adjustment bias was indicated throughout. While not proof in itself, the consistently high biasing effect of drip pricing lends support to the prominence of these effects. Such a conclusion stems from previous research suggesting that the effectiveness of drip pricing is a function of these two biases (Robbert and Roth, 2014). The detrimental effect of financial literacy on decision outcomes, especially drip priced ones, highlights that failing to adjust price correctly yields a loss in utility. More explicitly though, **Chapter 4** provided evidence that consumers anchor and adjust their price valuations per the anchor's direction. This was supported in both studies and in **Chapter 6** where IRPs for products changed in line with the manipulated prices presented.

Third, there was some evidence supporting prospect theory and the notion that losses loom larger than gains. In **Chapter 3**, purchase intentions indicated that BOGDIF was preferred over monetary promotions. As per prospect theory, losses from 'discounting' promotions should be larger than gains (Kahneman and Tversky, 1979; Ariely, Huber and Wertenbroch, 2005). Therefore, rewards from BOGDIF should be less appealing than the losses mitigated from, say, drip pricing. In contrast, many of the findings presented throughout also show that despite drip-priced products being the least favourable to purchase, they still exhibit the greatest bias. This would support prospect theory - the logic being that for less favourable purchases, where consumers know the outcome may be more expensive, they would evaluate the deal with greater diligence.

In the case of drip pricing, the complexity of the pricing process is thought to decrease overall decision confidence (Burman and Biswas, 2007). Therefore, the potential for loss that stems from the

low and anchored-upon price often looms over seemingly guaranteed gains like ‘freebies’. Although providing some support for prospect theory, the variance in the findings regarding promotions and prospect theory is also evident in the literature. This leads to the recommendation that further work will be needed to understand how prospect theory impacts promotional purchasing fully.

Although the practice-specific effects on decision utility support the underlying biases of each practice, the evidence is only partially conclusive. To explicitly state why, how and which practice biases decision the most would require having enough research to explicitly link a practice's methodology with a set of biases. For instance, it is commonly thought that drip pricing is particularly effective at increasing purchase intent due to consumers anchoring on the lower base price and failing to adjust the overall price throughout the process (Ayres and Nalebuff, 2003). Should this be validated in the literature, then biases could correctly be associated with promotion effects.

Underlying all promotional decisions is a promotion-value heuristic that stems from both social norms and personal experience. Because of this, the biasing effects observed, and indeed variance among the findings may be down to the individual heuristics associated with each method. For instance, some consumers may have had previously bad experiences with bundles and thereby have less bias provoking promotion-value heuristics. As a result, they evaluate the bundle with more rigor, reducing bias. Although possible, this explanation seems less likely given that consumers are thought to already know of the pitfalls of drip pricing (Kim and Kramer, 2006), and yet irrespective of this knowledge obtain the least utility. It could thus be argued that the practice-specific differences observed are the result of the associated decision biases. Since other decision biases may also partially explain the variance in these outcomes, further research is still needed to ascertain and validate which theories underlie a promotions decision architecture.

### **Evidence to support the power of price in promotional decisions**

Price has itself been described as its own unique purchase driver. In fact, recent research suggests that some consumers purchase based on the smallest inklings of price savings. This is not because they are keen to obtain better utility but because they gain pleasure from getting good deals (Rao, 2009).

Those consumers with a propensity to consider price as utilitarian are those the literature considers to be ‘deal-prone’. In fact, a recent paper concluded that price acts as a particularly strong driver for promotions that explicitly state price savings, e.g. reference pricing (Ackerman and Perner, 2004). It

also went on to ratify that consumers purchasing on price alone are at the full mercy of the price's fairness and so are likely to be bias-prone. The findings presented throughout seem to support both the importance and bias associated with price.

All of the experimental chapters showed that purchase intentions for promotions were higher than when there was no discount. Although purchase intentions were lower when the price presented to consumers was 'unfair', they remained significantly high in comparison to average prices. It could, therefore, be argued that although consumers may recognise prices as being unfair, they biasedly purchase anyway. However, it could be equally argued that the decision bias stemmed from the pricing architecture. There was no concrete proof to say that it was the hedonistic pleasure of getting a reasonable price rather than the framing method that prompted the results. In order to establish if this was the case, one would need to fully understand why a purchase is made. This was not something that was adequately addressed here as the primary focus was on the decision outcome. Moreover, the fact that the typology of those prone to making biased promotional decisions did not align with those typically described as deal-prone leaves us less unsure about why purchases were made. While there is evidence to support the importance of price, more so in the fact that promotions are primarily built around a price driver, more work is needed to understand its importance to different types of consumers.

### **Evidence to support the notion that promotional practices uniquely bias decisions**

The primary reason for conducting this research was not only to ascertain how promotional practices impacted utility but if specific methods had a comparatively more significant effect. To date, many studies have attempted to understand how and why a promotional method can so virally increase sales. From this research, the UK Department of Fair Trade has called for a review of the topic to improve their pricing policies. Similar initiatives have been seen across the globe with policymakers' keen to improve the power that consumers have to make better, more informed decisions. Despite this interest, studies concerning individual pricing methods have only gone so far as to discuss an approach's uniqueness but have not considered how certain method impact decisions over others. In real-world contexts, a consumer may experience multiple promotion types in any one purchase scenario, thus making researching this difference of central importance to developing our understanding.

In each study, there is quantifiable evidence to confirm that promotions bias decisions over non-promoted products. These findings offer two implications to the literature in that they confirm the

propositions of previous studies and elevate them. In general, the findings consistently showed practice-specific differences. By and large, it was confirmed that monetary promotions were more biasing than premium promotions, as previously suggested by Gamliel and Herstein (2011). Drip pricing and bundling were shown to invoke the most bias throughout while reference pricing and BOGDIF the least. The reasons for these differences are, however, harder to comment about. Since it is not clear which biases or mechanisms genuinely underlie each practice, only a few theoretical assumptions can be made. First, as Vaidyanathan *et al.*, 2000 noted, the numerical complexity and number of calculations needed to evaluate a promotion positively correlate to its biasing effect. Drip pricing, for instance, is typically thought to invoke bias due to the number of calculations and adjustments needed throughout the process (Bertini and Wathieu, 2008). Even if the consumer realises that the end price is higher than other similar propositions, the price is accepted out of convenience (Ayres and Nalebuff, 2003).

Bundling research proposes a similar explanation, suggesting that the complexity of assessing and comparing each item's price in mixed bundles is beyond the capacity of typical consumers (Jap, 2002). In support of these notions, not only were these two practices the most bias-invoking but their associated bias was strongly hinged on financial literacy and experience. Those with good financial literacy, for instance, were shown to improve utility using either intuitive or cognitive decisions in **Chapters 3 and 6**. The same traits helped improve utility for the other methods but to a lesser extent when considering the decision variance accounted for by these empowering dimensions. Together, this finding supports the literature showing financial literacy and experience to be empowering traits in decision utility (Lemmerer and Menrad, 2015) while providing support for the underlying dimensions said to influence each promotion.

In contrast to the two more complex promotions, the literature shows reference priced and BOGDIF items as being easier to assess (Gamliel and Herstein, 2011). In effect, López-Casasnovas and Puig-Junoy, (2000) suggests that because reference priced products only require the comparison between the RRP and sale price, the fairness of the price is easy to both calculate and assume. This naturally hinges on the RRP being representative and the price largely quantifiable, i.e. not subject to desirability pricing for instance. In contrast, the validity of 'free' item's claim is typically also easy to assess, especially so given that there are strict regulations around the word 'free'. Again, this is suggested to change if the 'free' item is not the same as the base product. Nevertheless, the rationale is that even reference pricing can invoke more bias than 'freebie' promotions given that a) the advertised



RRP is strictly relied upon; and b) the discount is often presented as a percentage off, which research shows is complex for consumers to calculate (Robbert and Roth, 2014). The findings presented throughout mostly confirm that BOGDIF invokes the least bias - although there were times when its effect was more profound. For instance, the indifference between purchase intentions for BOGDIF priced items that were fair and unfair in **Chapter 5** indicate that the perceivably guaranteed reward from the promotion can moot judgments of price fairness.

In conclusion, the findings presented throughout this thesis provide strong support for the biasing effect of promotions. They also confirm the notion that there are between-practice differences by being the first to provide quantifiable proof in this regard. Although the rationale for these effects is not conclusive, the findings do support the underlying decision biases that were previously used to explain the sales effectiveness of each practice. Moreover, this research has opened up a new research avenue that could begin to consider promotional behaviours and practices together rather than individually. By dedicating work to further understanding the comparative effects of promotional methods, policymakers have the potential to gain further insights that can help define fair pricing policies for individual methods. As will be discussed shortly, this is sorely needed in light of the somewhat generalistic pricing policies currently governing UK price setting.

### **7.3 Limitations of the Study/Investigation**

Although each chapter has provided significant support for the research aims, there are a number of limitations that deserve consideration. While study-specific limitations were discussed in each chapter, the purpose of this section is to raise awareness of the broader limitations that leave significant questions unanswered. After considering the types of limitations that a thesis like this presents, two themes emerge. The first are theoretical limitations that result from a lack of literature. The second are methodological limitations that stem from the research designs used and which implicate the actual findings presented.

#### **7.3.1 Theoretical Limitations**

Considering theoretical limitations first, the foundation of this thesis rests on trying to understand and define decision utility. While ample definitions of utilitarian decisions have been provided, there is an endless debate as to whether consumers know their preferences and so can accurately self-report their decision drivers. With much research supporting both sides of the argument (e.g., see Masoom, Pasha

and Asif, 2015), the possibility of preferences not being well defined prompts the question if true utility can ever be obtained. After all, if consumers do not know what and why they are purchasing, then all purchasing has the potential to be contextual and prone to bias. Moreover, this notion implicates the effectiveness of the used constructivist-WAM approach in two ways. First, any WAM approach relies directly on being able to assign and calculate the product feature weights. Not knowing the importance of factors to one's purchase goals would thus render the calculations used to measure utility useless. Second, even if a consumer were able to assign and weigh product factors at the point of sale, true utility would require a consideration of all potential costs and benefits. While the studies tried to make participants think of their broader rather than immediate needs, there was no clear way to assess the longitudinal utility of purchases. This would be needed to make a concluding statement about a purchase's overall utilitarian benefit.

Following on from the seemingly generalised concept of utility, another strong foundation of the current study is its three-step decision evaluation process (Einhorn and Hogarth, 1981). As was highlighted in **Chapter 1**, promotional purchasing is mostly impulsive or atones characteristics of impulsivity. Because promotional decisions are usually made so quickly, consumers rarely information search or take the time to recognise their needs. Should this be the case, then the evaluation stage becomes the most vital. Solely focusing on this specific stage of the decision could be argued as problematic, however, since it is the evaluation process that defines what choice is made, there is a rationale for this approach. Indeed, this was the rationale behind the Einhorn and Hogarth's proposed model. Moreover, their research also suggested that this stage is unequivocally the most vital for impulsive purchases where the evaluation is the first significant step to be undertaken (Sudhahar and Venkatapathy, 2005). Due to this approach, the thesis also mostly developed its structure, and hypothesis testing procedure on the basis of Einhorn and Hogarth's (1981) proposed model and the cogno-affective theory of promotional decision-making (Laroche *et al.*, 2003)

Although Einhorn and Hogarth's (1981) proposed evaluation process follows a logical sequence of events, it is not inconceivable to suggest that it is flawed. For instance, it postulates that following the direct method of processing stimuli, the most critical attribute is processed. While this may be the case for simplistic purchases, research has shown that multiple attributes can be processed at once. If one was to consider the validity of ELM theory, for example, it is possible that a vast variety of product information is processed at once. This indeed seems plausible, especially for more implicit

processing such as colours, packaging or shelf presence. The bilateral processing of promotional attributes was to some degree supported in **Chapter 6**, where price evaluation mechanisms did not predict brand affinity or its effect on utility. However, as with all consumer models, it is equally possible for only one attribute to be considered in the proposed fashion. Indeed, research has shown the primary attributes of importance to be price and quality with these two often determining a purchase decision alone. Because of this, the proposed three-step process may be valid, although as the constructivist approach would suggest, it varies contextually. Since promotions are primarily price/reward-driven, it makes sense that these attributes are processed first as a proposed. A lack of validity surrounding the model proposed leaves room for further testing before any affirmations can be made.

The final theoretical limitation of concern was the overall scope of the research presented. This potential limitation originates from the lack of theory in the area, from which two concerns arise. First was the significant lack of theories considered. Unlike in established research, where multiple theories are evaluated and then either developed or discounted as part of the testing rationale, the lack of literature in the promotional space made this impossible. Few papers have considered decision-making in promotional contexts, and so even fewer models have been developed in this space. Novel research, such as that presented here, would therefore typically consider a more significant number of applicable theories before fixating on one approach, i.e. the three evaluative steps. Being unable to take such an approach, the presented rationale limits the overall applicability of the findings in that they do not stem from a holistic representation of the consumer, decision or pricing literature. This also means that when discussing the implications of the research to the research fields applicable to this topic, only generalist assumptions and prescriptions can be made until the findings are considered in light of a greater host of theories.

Further to the lack of theories considered, the literature gap surrounding the cultural norms for promotional purchasing made it particularly hard to take a global stance on the findings. In traditional consumer research, there are significant similarities but also differences within nations. US states, for instance, have their own consumer norms while a clear divide also exists between the northern and southern US territories (Herbig and Genestre, 1996; Sexton, R. J., and Zhang, 2001; Weber and Capitant de Villebonne, 2002). Because the current sample was UK-based, the question remains what applicability the findings have to other individualistic societies like the US. In decision research of a similar nature, cross-over effects are generally assumed between western cultures, e.g. Europe and the

US (Weber and Capitant de Villebonne, 2002). Moreover, because promotions and indeed advertising are regulated differently between nations, it is even more problematic to assess how or if the promotional findings are ecologically valid. Thus, we must understand how different cultures interact with promotions to conclude how these findings apply to the wider consumer population. This will be a good task for future research to address.

### **7.3.2 Methodological Limitations**

Upon review, a number of methodological limitations have left particular questions answered. The first to be considered is the sample population. Unlike in other research streams where population sizes can be small, e.g. autism research, consumer research is plagued by the vastness of the real population. In essence, this constitutes all humans who can make purchases. Since research of any sort should aim to find and predict relationships within that sample, the findings from a mere 200-300 sample are hardly representative. Therefore, what the findings really predict is a model that is representative of a London consumer group. Londoners earn above the UK average and have the highest urban consumption rate in the UK (Choudrie and Dwivedi, 2005; Davidson and Hendry, 1981). The sample used was small, reflected a fractional segment of the comparatively wealthy in the UK, and did not account for inter-cultural differences. In light of this, the findings from this research, although additive to the literature, should not be considered as conclusive until further, more nationally representative work is conducted.

Some concerns also arose with some of the design methods employed, particularly the between-subjects designs used to establish between-practice differences. The primary advantage of this method is that it reduces the likelihood of carry-over effects while also allowing for a shorter, more concise, measurement process. While these research advantages are beneficial, the main problem is that it is impossible to maintain homogeneity across groups. Since this method uses vastly different individuals, each with their own subtle, unmeasured, differences, results can easily be skewed or misrepresented. While age, gender and social class are some of the distinct individual differences, fluid intelligence and other personality constructs can be equally influential on purchasing. For example, some consumers may have a high IQ but are nervous when spending money so achieve lower utility than they should (Punj and Stewart, 1983). Such individual differences can create a lot of background noise, obscuring genuine patterns and trends.

Moreover, a between-subjects design that splits participants by promotional practice was particularly problematic as multiple promotional types are presented together in real retail contexts. In **Chapter 6**, this was a concern as participants were assigned to a promotional condition that dictated the practice experienced throughout the simulation. In order to improve the design, further work will also be needed to develop the actual simulation so that it is more akin to real purchase environments. Ideally, promotional tags should be more prominent; the resolution and quality of aisles should mimic retina-grade resolutions; and browsing time should be monitored to account for more than just basket choices. Combining these improvements with a larger sample would allow for an experimental scenario that could distinguish groups by promoted product rather than promotional type.

Alongside the research design used, there was also cause for concern regarding the validity and accurate framing of two of the practices, namely, drip pricing and BOGDIF. In the case of the former, the main issue was ecological validity. In online contexts, drip pricing can easily be used as various surcharges – e.g. card charge, delivery or tax – can be applied freely. However, in retail environments, the use of drip pricing is considerably more difficult. In the UK, for instance, VAT has to be included in the overall price. Card surcharges could be used as could various other surcharges, e.g. plastic bags. Because these are not frequently used in UK grocery contexts, there remains a question as to how valid their inclusion was. That said, in the US, tax and surcharges are entirely separate of the presented price and thus simulate drip pricing. What could, therefore, be concluded from the drip pricing findings is it that the bias associated with this method is feasible in a grocery context should it be used. Should retailers wish to utilise this method more, they would need to find ways of further dripping the price throughout the process, excluding mandatory surcharges. Interestingly, this may become more prevalent in the future in light of discussions surrounding non-biodegradable packaging, e.g. plastic, which may require a tax or surcharge to be added should the item be packaged in that way at the checkout.

Second, creating a biasedly priced version of BOGOF was challenging due to the stringent regulations surrounding the use of the word 'free' (*see* page 318). However, unlike in BOGOF situations where a significant price rise in the non-free item would be easily detectable, in BOGDIF scenarios this would be possible. Furthermore, while the use of BOGDIF is more frequent than drip pricing in retail environments, there is no concrete evidence to suggest the use of inflated reference prices. Even if it was shown to be so, the total price can never be as high or higher than the single unit or un-promoted

price, as would be impossible in other methods. The promotional 'ploy', therefore, could be that the consumer does not get something for 'free' but something that is still discounted. This method was used throughout this thesis although it is still debatable whether this reflects true practice or a biased pricing effect. It could be argued that it does, as the method directly yields a loss of utility from what is advertised.

## **7.4 Future Research**

In light of the limitations discussed, there are a number of future research opportunities that warrant exploration. The aim of this work should be to both extend the growing body of promotional literature and provide practical insights that can inform policy and business. There seem to be two types of research needed – that which directly extends the studies presented, and that which focuses on the wider issues surrounding promotions.

### **7.4.1 Direct Extensions of the Study**

Although the academic research methods used have shed light on the practice-specific bias, the use of marketing-derived 'big data' would complement the findings. In particular, it would be useful to use such data to ascertain which promotions equate to the most sales and why and for which products. This sort of sales data would help define sales cycles by highlighting when promotions sell best. Based on this information, researchers could begin to modify and refine the model with a host of environmental factors. For instance, the data may show that during the holiday seasons, expendable income and inventory needs are highest. Thus, consumers may engage with specific promotional methods more, e.g. bundling. Using this data will help highlight which products the research should best focus upon and thus increase the overall applicability of the model. While it could be argued that the data collected by big retailers are not necessarily robust enough, it has excellent potential to direct research in areas that are interesting from an economic perspective but unexplored from a behavioural perspective. It can also help to provide robust descriptive typologies of those buying promotions, which can lend itself well to helping to focus research on specific consumer groups.

A direct extension of these studies that should be considered immediately is the contextual variability in the model. In this thesis, the context primarily pertained to mid-priced grocery stores, e.g. TESCO, which naturally defined the type of behaviours consumers may exhibit. More specifically,

research suggests that grocery purchases typically require low involvement – meaning that consumers roughly know what they want and so purchase somewhat autonomously (Lee and Kim, 2015). However, even if the items are on similar price points (e.g., bread vs aspirin), the engagement and purchasing behaviours involved can be considerably different. For instance, research shows that when buying drugs, consumers are generally more involved and less impulsive (Kim and Sung, 2009). This behavioural difference differs not only between stores (e.g. TESCO vs Boots) but can also differ within the same store context, e.g. the pharmacy section in TESCO. Consequentially, if the findings are to be applied across multiple product and retail-types, research understanding these contextual differences is sorely needed. This is especially important in helping to develop fair pricing practices which are currently relatively generalised across product types.

In a similar vein, there will inevitably be an even greater need to consider how the model predicts behaviour in online contexts. Online purchasing typically facilitates the information search stage and ease of comparison which can help utility (Moe, 2003). Because it is easy to switch choices online, it is consistently assumed that the online retail environment has led to a degradation of brand loyalty (Danaher, Wilson and Davis, 2003). A range of other psychographic factors is also essential in online purchasing, including age and technological acceptance, which significantly determine how and when online purchases are made (Zhang, Prybutok and Strutton, 2007). As online purchasing is becoming increasingly popular and in many ways is less regulated, there is a need to consider how the model applies in an online context. This is especially so as some promotional methods, e.g. drip pricing, work best in online settings and so may have an even more noticeable impact. As there are clear differences in how promotions are presented, and purchases are made, across online mediums this focus should be among the next steps for researchers. Doing so will help inform if pricing practices need to be developed for specific contexts.

A further logical extension of the current research is to begin focusing on generational differences in promotional purchasing. As was touched upon in **Chapter 1**, there is already evidence to suggest that purchase norms are adopted, like many other traits, from one's parents. This finding has been extended to millennials - who are thought to be particularly price-sensitive consumers who expect deals before forming any brand loyalty (Lewis, 2004). Developing the model to understand how promotional behaviours are adopted across generations will be highly useful in helping to predict who will be most susceptible to bias and what regulations need to be put in place. Furthermore, while the

concept of generation primarily sits within the realm of psycho-demography in the model, it poses a far more critical question for both the aims and implications of this thesis.

Over the last thirty years, the big retailers have focused their entire models on the baby boomer generations W and X. However, despite generations Y and Z only accounting for a third of the population, they now control over half of the consumption GDP (Farris, Chong and Danning, 2002). They are also estimated to account for 60-75% of any brand's digital success. Therefore, retailers have explicitly begun designing their strategy and promotions with these generations in mind. The significant change in this strategy needs to be reflected in the model which primarily used Gen X as the sample. By studying these generational differences, the model will be able to provide two insights. The first will be how to target specific generation consumer groups with promotions successfully, and the second will determine which factors promote bias and thus require education initiatives or regulation.

Perhaps most important of all, immediate extensions of the study should seek to integrate alternative dimensions that may influence each of the primary decision phases. In the initial stages of the model, for instance, only a small number of competence factors were considered. Unconsidered measures of intelligence, technological aptitude and online purchasing proficiency could have a significant impact on how utility is obtained. Furthermore, to validate the self-reported cognitive and intuitive measures (NFC and FII), time recordings and heat maps could have been used to assess the amount of time taken to process stimuli. Researchers could also begin to compare stimuli mediums for promotions, e.g. online, device-based and in-store. Based on these findings, a picture would emerge of how the medium affects processing and subsequently to what extent price is evaluated in the second stage of the process.

Finally, as the current measure of IRP malleability reflects only part of the price-evaluative mechanism, developing the price evaluation stage will also be crucial. The addition of fairness and intent questions would begin to help indicate if IRP was successfully manipulated and if it was deemed fair. Finally, having developed a wider approach in the previous stages of the model, the third evaluative stage could account for a vast variety of other factors. While brand relationships were the most logical choice, to begin with, other factors such as social desirability, brand equity or even something as simple as reviews may all significantly sway a decision further. Consequentially, there is enormous potential



to further develop the model across all its critical stages, which will be vital if we are to understand the true influence that promotions have on the decision process.

#### **7.4.2 Broader Issues to be Covered in Future Work**

Alongside the more immediate research needed, there are a number of broader issues that warrant exploration once the model has been further developed. These issues surround three central themes that focus on developing governmental/economic policy, retailer strategy and consumer behaviour insights.

#### **Governmental/Economic Implications**

##### **Policy**

As discussed throughout, the research presented has promising applications in helping to define fair pricing practices. In order to develop these, there is a need to understand how pricing practices and the research surrounding them influence policy. To date, there has been very little research on how pricing research or data is applied to policy. This is concerning as pricing is a central driving factor of the economy, as will be discussed shortly. Research considering this issue could be both quantitative and qualitative. First, it may be worth conducting interviews with policymakers to understand what and how much evidence is needed to create real change in the strategic manifestos they propose.

Alongside these interviews, further reviews and literary analyses concerning themselves with pricing across sectors would be beneficial. A review could compare discounting practices across financial, retail and even charitable sectors to assess if there are any consistent patterns which are as yet unregulated. Meta-analyses could complement these findings by correlating disposable income, consumption GDP and total revenue derived from sector-wide promotions. From this, research could then go on to evaluate the current pricing practice legislation in high-consumption nations to assess if or how retailers are subverting lax regulations to their benefit. Since it is clear from this research that promotions irrevocably degrade the potential utility obtained, this would be a worthwhile exercise to improve fair pricing around the globe – since consumption is now global.

To compliment this qualitative work, it would be advisable to use a quantitative approach that combines the use of big data and academic rigour. Retailers hold a considerable amount of information on their pricing practices and consumer typologies, which, if accessed, could be used to inform a wealth of new research that could directly support or vitiate future policies. The large sample sizes of these

datasets could reassure policymakers when considering if the findings merit action. Alongside the big data, quantitatively assessing the rationale and decision-making practices of policymakers will help understand how to push forward future pricing initiatives. Since it is only a select few individuals who determine policies in the UK, it is imperative to be able to present research to this cohort in a manner that encourages action. After all, only by understanding the people involved will this endeavour succeed.

## **Education**

Since generational-specific behaviours are becoming a topic of interest, it would also be worth building a section of literature around education and consumer empowerment. One of the main findings in this investigation is that consumers have tools (e.g. experience and financial literacy) at their disposal to help mitigate bias. Since a direct extension of the model would be to consider generational differences, research should also consider how best to empower and educate these groups. To do so, future research would do well to begin assessing which empowering traits are vital to decisions by considering a range of decision-makers that vary in expertise across generational groups. Based on the findings, a variety of interventions could be trialled to help users think more about their consumption needs and thus help improve utility. For example, upon entering a supermarket, a prompt could remind consumers to be wary of the impact of over-consumption and the prices they are paying. While this tactic may work for the tech-savvy generations Y and Z, such an approach would need modification for older generations. Understanding what traits consumers rely on when making a decision, as well as the tools they use, will be needed to help devise educational tools specifically for each group. In sum, finding ways to educate consumers about their purchasing habits and how to evaluate prices may serve well in helping improve the overall conscientiousness and savings of consumers with lower disposable income.

## **Economics**

A final area worth considering is how promotions promote local and national economies. In essence, even the most straightforward promotions promote purchasing and increase revenue for businesses. Some businesses are even built on a discounting/promotional model, e.g. ALDI. However, how is this reflected in the overall economy of a country? Some market research estimates that 20-30% of sales are made up of promotions, equating to a national revenue of around £500 billion in the UK. From such figures, it is possible to conclude that national retailers like ALDI contribute a significant amount to local employment, and even the national economy, as a direct result of promotional purchasing.

Consequentially, it is important to begin questioning why, how or if their discounting pricing practices can be limited in ways that promote utility but can further develop their business. Research in this area would need to consider the norms behind promotional use and the extent that businesses rely on these for their revenue.

Quantitative testing could be used to begin assessing promotional norms within organisations and discern the extent to which promotions are used to retain consumers via discounts or to increase revenue. Based on these inter-business norms, promotional interventions can then be devised. For example, it may be possible for governments to set standardised RRP's for expensive products which consumers could trust and base their price evaluation on. Such high-level research would also do well to consider the norms of policymakers. It may be that these individuals feel that the economic benefits stemming from bullish pricing practices are too much of a benefit to regulate. In sum, only by considering the cost-benefit ratio of regulating promotions can we begin to start devising ways to regulate them and help empower consumers. This could be via better pricing practices or interventions that help them consider the utility of their purchases.

### **Retailer Strategy**

There is also ample room for future research to understand how retailer goals and marketing strategies to promote bias in the model. One of the primary goals retailers aim to achieve via promotions is increased revenue and market penetration. To do this, promotional marketing is often used to encourage consumers to switch over to their brand, thereby building brand power in the process. To understand how these goals link with promotional purchasing, it would be worth further understanding how brand equity, brand relationships and market power affect consumption. As has been shown, even small degrees of brand loyalty can inadvertently impact the utility of decisions. A part of this loyalty is brand trust. Whether by choice or as a function of the media, it is also true that consumers tend to trust giant conglomerates, especially if they have a good reputation (Holt, Quelch and Taylor, 2004).

A number of studies indicate that trust in these retailers leads to higher consumption and thus the potential to be duped by false advertising (Hamzaoui Essoussi and Zahaf, 2009). A prime example of this was the VW scandal in 2017, in which VW used its reputation to cover up its use of emission cheat devices in the US market. Consumers and even governmental agencies trusted the brand enough to follow and subsequently buy its cars as a result of their clear diesel promotional campaign. However,

despite this real-world example, very few studies have considered how such devious behaviours of large conglomerates significantly alter consumption. The results of this line of work may show that because of a lack of consumer trust, only discounted products or even no products are engaged with.

Moreover, if research shows that consumers intrinsically trust and then purchase from brands such as VW, then companies with alleged malpractice deserve special pricing restrictions and taxes. An example of this would be limiting all promotional activity for a period so that consumers have more time to adequately research products. In the case of VW, where the costs – both monetary and environmental – were significant, the results showed that their initial tax levy promotion led to a misinformed increase in sales of approximately 15%. Being able to find valid grounds for imposing these rules would significantly encourage future fair pricing practices. It would also encourage transparency between retailers and consumers, leading to more informed choices.

Another topic warranting consideration is the effect of promotions on price wars. It is evident that when retailers continuously promote products/brands, their competitor retailers follow suit. As a result, price wars can ensue for even the simplest of commodities, over time leading to lower price expectations for those products (Heil and Helsen, 2001). However, a growing concern in the media is that in order to cope with these price levies, retailers need to make product changes to increase profit margins. An example of this was the recent scandal involving the addition of undisclosed horse meat to UK 'beef' products. The investigations uncovered that price wars between retailers and their suppliers were to blame, with retailers' attempts to cut costs leading to supplier deception and product mislabelling. Despite the consumer outrage that followed, consumers continued to expect lower prices without sacrifices to quality. What is therefore needed is research applying the promotional decision model to contexts where price wars have ensued. This research should begin to assess what compromises to their utilitarian objectives if any, consumers and retailers are willing to make. From this, we can begin to assess if there are any practice-specific effects and if price wars alter the way that promotions are processed and expected.

Working with senior executives to assess the organisational culture regarding pricing and price transparency during price wars would also help us learn more about how promotions are conceived. A series of decision experiments could be devised to assess how retailers would strategically discount and price products despite knowing about essential changes to, say, a product's quality. For instance, it

would be worth investigating if retailers would communicate product deficits if it might reduce their profits. Based on these findings, decision strategies should then be tested across consumer groups, assessing if compromises can be made for the sake of a discount. It may be that promotions are shown to degrade utility irrespective of the potential costs, e.g. loss of quality associated with price wars. If so, the aim of this integrated approach could then focus on understanding how and what retailers should communicate about promoted products to make their choices as informed as possible. One way of operationalising this would be via information about why a discounted price is justified and what, if any, changes have been made. For example, a statement like 'same happy animals' or 'about to expire soon' may complement a discount by providing a more precise, more informed, purchase choice. Research considering this will be vital if we are to help inform consumers about their promotional choices while also offering retailers the potential to sell with transparency. Should the findings show that consumers can make sacrifices for discounts, then retailers have the potential to retain brand loyalty while being able to sell inferior products with promotions. Over time, this will subsequently help reduce price wars as retailers will educate consumers about how or why a price is valid.

A final retail aspect that future work could consider is how the model fits into B2B (business to business) pricing contexts. Research shows that the processes involved in B2B pricing are very much identical to those found in a typical consumer context (Zhang and Ansari, 2014). Because of this, Einhorn and Hogarth's (1981) three-step, decision evaluation process would seem to apply equally. First, this research should try to evaluate and understand how businesses offer each other discounts, using these methods in place of the 'big four' in the model. Next, a number of other environmental factors may need to be incorporated into the model. Among these could be decision involvement, market conditions, competitor prices and brand reputation. Since decisions in B2B contexts are typically more involved than in B2C, it would be interesting to see how and why bias manifests and what other factors play a role. For instance, an employee with no inherent interest in their employer's overall revenue may be more intuitive in their decision-making, thus leading to biased negotiations and outcomes.

Although many other factors could be considered in the third stage of the decision process, the importance of B2B relationships is argued by some to be even more critical than in B2C contexts. For example, in the US, the relationship component typically accounts for a significant part of business decisions (Rauyruen and Miller, 2007). Should the same bias be observed among business decision-

makers, then there is room to further explore and improve current B2B pricing tactics. Based on this, businesses can then start to devise strategies to improve engagement and subsequently profitability. This research would provide an interesting extension to the model that would help validate its applicability to promotions across sectors and types, thus serving as an informative tool to help educate decision-makers.

### **Consumer Research Areas**

A number of broader consumer research avenues deserve exploration. The most important of these is to develop a deeper understanding of promotional stimuli and what can be done to promote more informed and sustainable decisions. One fundamental issue that psychologists are starting to address is overconsumption and what can be done to mitigate wasteful purchasing for the sake of the environment. In some cultures, the consumption to population ratio is at an irreversible high, e.g. in the US (Lee, Rabanal and Sandri, 2010). Importantly, inventory needs for these consumers are seemingly among the least considered factors with the environmental impact of this overconsumption being significant. For instance, Jambeck et al., (2015) estimates show that approximately 275 million metric tonnes of plastic were dumped in 2017.

Since promotions are tied to impulse purchasing, it could be argued that promotions fuel overconsumption. If so, there is a strong rationale to begin testing if environmental and inventory-based cues on promotions affect overconsumption. Furthermore, although inventory needs for many US consumers may not provide utility now, the reality is that it will have to in the future. With resources becoming ever scarcer and overconsumption slowly becoming unsustainable consumers in, say, 30 years will have to be far more conscious of what, when and why they buy (Barbarossa and De Pelsmacker, 2016). In order to research the link between promotions and consumption for the benefit of sustainable purchasing, many research avenues may open. For example, future researchers could combine neuroimaging techniques with behavioural experiments to test the pleasure responses of various stimuli on promotional consumption. The purpose would be to ascertain if environmental cues alongside promotions help consumers think more about their actual needs, creating a scenario in which utility has been obtained but overconsumption mitigated.

Developing a research stream like this would be valued by policymakers in the future who may not be able to explicitly limit promotional purchasing but can instead limit overconsumption by drawing

attention to waste, e.g. plastic disposal, the effects of overconsumption (e.g. obesity and illness) and products' environmental footprint (e.g., one Big Mac takes 9,000 litres of water to create). Drawing on aversion techniques that have been researched in health psychology (e.g. with smoking) could be helpful in ascertaining how this decision model can be improved or applied to help make promotional consumption behaviour more utilitarian for both the consumer and environment. Bridging the gap between what is consciously utilitarian and that which is moral may help consumers obtain a more authentic form of utilitarianism in the future. This type of focus represents just one of the ways that the model can be used to investigate broader consumption as a result of promotions.

## **7.5 Practical Implications of the Research**

As with any consumer research, many practical implications warrant consideration. First and foremost, the research has particular implications for the way that consumers shop. It can also be used to improve education and policy to facilitate purchase utility. Each of these areas will now be considered.

### **Pricing Policy Implications**

There are currently quite austere gaps in the pricing policies set out by the UK government. This is particularly troubling given that this investigation seems to point to similar flaws in policies in both the EU and the US. Here are the five core policies set out by the international community regarding pricing:

- 1) Promotional offers should be unit-priced to reflect the single standard product.
- 2) Retailers may give additional information if they wish (for example, the 'reduced unit price if purchasing a multi-buy' offer may be shown) as long as it is clear to which products it relates.
- 3) Limited period promotions (such as 10% extra free) that relate to individual products may retain the unit price of the standard product for the period of the offer. Retailers may give additional information if they wish - for example, they may show the unit prices of both the standard and promotional products, but they must be absolutely clear to which products they relate.
- 4) Is it truly free? Describing a product as 'gratis', 'free', 'without charge' or similar if the consumer has to pay anything other than the unavoidable cost of responding to the commercial practice and collecting or paying for delivery of the item.

- 5) Pulling the wool over consumers' eyes. Passing on materially inaccurate information on market conditions or on the possibility of finding the product with the intention of inducing the consumer to acquire the product at conditions less favourable than normal market conditions.

Based on these policies, it is clear that for most of the 'big four', the current guidelines are rather lax. In particular, these policies primarily pertain to making sure that 'accurate market conditions' are presented, and that the information is clear to understand. However, as most retailers well know, market conditions change daily – especially if they control a significant proportion of the market. For example, TESCO accounts for 30% of the UK grocery market. Therefore, its pricing decisions define much of the rest of the sector. If combined with, say, Sainsbury's (17%) and ASDA (15%), the majority of the market is then accounted for. As a result, providing accurate information on, say, market representative RRP's is mostly down to the practices of these retailers. Furthermore, a retailer like TESCO could justifiably argue that the RRP for a promoted product may have to be stated as higher due to a price rise set for after the end of a promotion.

It is also clear that very few of these policies directly inhibit any of the promotional practices other than BOGOF. For this promotion, the policy clearly states that the additional item needs to be free. In an online context, this can be subverted by inflating the delivery price. Moreover, in BOGDIF scenarios, the core item's price could feasibly be inflated and attributed to rising costs associated with the demand for the core item. Thus, the additional item is 'free' while the core item has simply become 'unavoidably more expensive'. Given that these policies are currently weak, there is considerable room to use the research findings to develop strategies that will aid consumers to obtain increased utility. An example of such a policy would be forcing retailers to use an RRP based on the average price over the last three months.

### **Education Implications**

Aside from the implications to pricing policies, this research has practical implications to consumer education. In particular, the research shows that consumer experience, financial literacy and the correct use of cognition can significantly enhance decision utility, whether from promotions or not. Helping consumers improve their financial literacy and ability to quickly and effectively calculate price fairness should, therefore, be an essential objective for governments. Interestingly, some education initiatives



have already been implemented in the UK, although these primarily focus on educating consumers on how to evaluate financial products.

The aim of these initiatives (infomercials and leaflets) is to improve consumer ability to calculate compound interest, variable rates, savings potentials and personal expenditure. However, many of these enterprises are targeted at those in debt and require consumers to choose to seek this information out actively. Recent statistics indicate that because of this problem, a relatively poor 10% integration rate among the target populous has been indicated. Targeting consumers who are already in debt, or who have already lost considerable utility, has therefore been argued to be less effective than preventing it in the first place. In light of this debate, there is a need for new interventions to be developed. For instance, helping consumers to develop their choice consideration and choice impact could be achieved via an app that triggers push notifications upon entering a store. Simultaneously, educating children on promotions, financial calculation approaches and methods of saving money may help equip them to handle their finances in adult life better. Both testing and research will be needed to develop any successful initiatives that can help to empower consumer decisions.

### **Retailer Implications**

Aside from the implications for consumers, retailers gain equally as much. Based on the decision bias found, retailers could devise a range of promotional techniques that levy the factors promoting bias to increase sales. With careful planning around the current regulations, retailers may be able to use the indicated biases to their advantage by offering less of a discount than previously. Being able to do so would significantly boost their margins. Combining these tactics with a promotional schedule for backlist products would be immensely helpful in guaranteeing annual revenue streams.

Complementing the use of promotions, retailers also have the opportunity to develop and determine brand power. Although brand loyalty can bias decisions, it hinges on the retailer being able to offer consumers savings. Therefore, there is an opportunity for retailers to promote specific brands and lower or higher price points to make them more or less favourable to purchasers. This strategy will also define brands' overall power from both an economic and desirability perspective. Lower priced and more frequently promoted items may be perceived as cheaper and less valuable. In order to maintain loyalty, however, (which the retailer would naturally want) it would be important to do one-off stock limited promotions for bigger brands. These would offer loyal consumers the chance to get good value

for money on what they perceive as premium brands or products. ALDI, while not offering a loyalty programme, does this exceptionally well by stocking a limited number of super-premium products and selling them at cost to attract customers. This tactic thereby builds loyalty and encourages simultaneous purchasing as a result of the promotion.

Using techniques that play on consumer weaknesses in the decision process, therefore, have the potential to increase both sales and loyalty should the consumer remain oblivious to the marketer's intention. Based on the model presented here, retailers could subsequently go about devising more tactful ways to utilise their loyalty and status to devise new pricing and promotional methods to boost their revenue. Whether this is at the cost of consumer utility and loyalty will depend on the amount of risk the retailer is willing to take in devising their pricing strategy.

## **7.6 Conclusion**

This thesis sought to provide empirical evidence for the biasing effect of promotions on decisions. The findings presented here support this notion irrevocably and highlight that each practice has its own individual effect. In line with the literature, the practices that require the greatest number of calculations, i.e. drip pricing and bundling, showed the greatest biasing effect. Using an approach that combined quantitative surveys with experimental simulations, these results were the first in the promotional area to cross-compare the effect of practices on decision utility. Due to the novel nature of these findings, a variety of avenues have been opened for future researchers.

Promotional effects on utility have been shown to be as much a factor of the consumer's psychology as the practice-defined price presentation. Since only a small number of studies have considered how a consumer's psychology could impact promotional purchasing, expert interviews were employed. The emergent themes from qualitative design supported the importance of a number of psychological traits in decision-making. The findings indicated that the ways in which consumers process prices, use them in evaluations and define their utility with brand relationships are significant in determining the extent of bias. The importance of these dimensions shows two things. First, consumer psychology plays a vital role in promotional purchasing. While typologies such as 'deal-prone' are relatively common, they rarely go beyond personality and demography. Therefore, the findings show that a wealth of other factors can influence this decision type. Second, using findings from the wider field of consumer research to form hypotheses in this unexplored context was fruitful. Using a similar

approach, future scholars interested in promotions have a rationale to generalise the findings from relevant fields to generate new hypotheses.

Combining practice architecture with psychological dimensions, a model of decision-making and utility was created. The model was primarily validated and supported the findings in the previous chapters. Although addressing the research gaps was of primary interest, it was the subsequent practical implications and avenues for future research that is naturally now of most interest to scholars in the area. In particular, this piece of research was embarked on to help inform and educate a broader audience that is equally as interested and engaged with consumerism as academics in the pricing area are. The findings of this study should help consumers know more about themselves, help policymakers define how we should engage with promotions, and help retailers create promotional strategies. Moreover, having been able to conduct a novel and relatively unexplored topic, the hopes is that researchers will now take the model and further develop it in new and exciting contexts.



## REFERENCES

- Aaker, J., Fournier, S., & Brasel, S. A. (2004). When good brands do bad. *Journal of Consumer research*, 31(1), 1-16.
- Ackerman, D., & Perner, L. (2004). Did you hear what my friend paid! Examining the consequences of social comparisons of prices. *Advances in Consumer Research*, 31, 586– 592.
- Adaval, R. & Monroe, K. B. (2002). Automatic Construction and Use of Contextual Information for Product and Price Evaluations. *Journal of Consumer Research*, 28(4), 572-87.
- Agarwal, S., & Mazumder, B. (2013). Cognitive abilities and household financial decision making. *American Economic Journal: Applied Economics*,5(1), 193-207.
- Aguirre-Rodriguez, A., Bosnjak, M., & Sirgy, M. J. (2012). Moderators of the self-congruity effect on consumer decision-making: A meta-analysis. *Journal of Business Research*, 65(8), 1179-1188.
- Ahluwalia, R., Burnkrant, R. E., & Unnava, H. R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of marketing research*, 37(2), 203-214.
- Ahmetoglu, G., Fried, S., Dawes, J., & Furnham, A. (2010). Pricing practices: their effects on consumer behaviour and welfare. Report prepared for the Office of Fair Trading.
- Ahmetoglu, G., Furnham, A., & Fagan, P. (2014). Pricing practices: A critical review of their effects on consumer perceptions and behaviour. *Journal of Retailing and Consumer Services*, 21(5), 696-707.
- Ailawadi, K. L., Gedenk, K., Langer, T., Ma, Y., & Neslin, S. A. (2014). Consumer response to uncertain promotions: an empirical analysis of conditional rebates. *International Journal of Research in Marketing*, 31(1), 94-106.
- Ailawadi, K. L., Lehmann, D. R., & Neslin, S. A. (2003). Revenue premium as an outcome measure of brand equity. *Journal of Marketing*, 67(4), 1-17.
- Ailawadi, K., & van Heerde, H. (2015). Consumer-Based and Sales-Based Brand Equity: How Well Do They Align?. working paper, Tuck School of Business, Dartmouth College [available at

[https://www.researchgate.net/publication/282602155\\_Consumer-Based\\_and\\_Sales-Based\\_Brand\\_Equity\\_How\\_Well\\_Do\\_They\\_Align](https://www.researchgate.net/publication/282602155_Consumer-Based_and_Sales-Based_Brand_Equity_How_Well_Do_They_Align)].

Ailawadi, K.L., Neslin, S.A. and Gedenk, K. (2001), "Pursuing the value-conscious consumer: store brands versus national brand promotions", *Journal of Marketing*, Vol. 65, pp. 71-89.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer, Berlin, Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.

Ajzen, I., & Fishbein, M. (1967). *Readings in Attitude Theory and Measurement*.

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research*, 13(4), 411-454.

Alba, J. W., & Hutchinson, J. W. (2000). Knowledge calibration: What consumers know and what they think they know. *Journal of consumer research*, 27(2), 123-156.

Alba, J. W., Broniarczyk, S. M., Shimp, T. A., & Urbany, J. E. (1994). The influence of prior beliefs, frequency cues, and magnitude cues on consumers' perceptions of comparative price data. *Journal of Consumer Research*, 21(2), 219-235.

Alba, J. W., Mela, C. F., Shimp, T. A., & Urbany, J. E. (1999). The effect of discount frequency and depth on consumer price judgments. *Journal of Consumer Research*, 26(2), 99-114.

Alford, B. L., & Engelland, B. T. (2000). Advertised Reference Price Effects on Consumer Price Estimates, Value Perception, and Search Intention. *Journal of Business Research*, 48(2), 93-100.

Alford, B.L. and Biswas, A. (2002), "The effects of discount level, price consciousness and sales proneness on consumers' price perception and behavioral intention", *Journal of Business Research*, Vol. 55 No. 9, pp. 775-83.

Allenby, G. M., & Lenk, P. J. (1995). Reassessing brand loyalty, price sensitivity, and merchandising effects on consumer brand choice. *Journal of Business & Economic Statistics*, 13(3), 281-289.

Aluri, A., Slevitch, L., & Larzelere, R. (2015). The effectiveness of embedded social media on hotel websites and the importance of social interactions and return on engagement. *International Journal of Contemporary Hospitality Management*, 27(4), 670-689.

Alvarez Alvarez, B., & Vázquez Casielles, R. (2005). Consumer evaluations of sales promotion: the effect on brand choice. *European Journal of Marketing*, 39(1/2), 54-70.

Amara, R. B., & Kchaou, A. S. (2014). The role of sales promotion in inducing impulse purchases. *International Journal of Management Excellence*, 3(1), 362-372.

Amorim, P., Costa, A. M., & Almada-Lobo, B. (2014). Influence of consumer purchasing behaviour on the production planning of perishable food. *OR spectrum*, 36(3), 669-692.

Andrews, M. L., Benedicktus, R. L., & Brady, M. K. (2010). The effect of incentives on customer evaluations of service bundles. *Journal of Business Research*, 63(1), 71-76.

Antil, J. H. (1985). Couponing as a promotional tool: Consumers do benefit. *Journal of consumer affairs*, 19(2), 316-327.

Archer, L., Hutchings, M., & Ross, A. (2005). Higher education and social class: Issues of exclusion and inclusion. Routledge.

Areni, C. S., & Kim, D. (1993). The influence of background music on shopping behavior: classical versus top-forty music in a wine store. *ACR North American Advances*.

Ariely, D. (2008). *Predictably irrational* (p. 20). New York: HarperCollins.

Ariely, D., Huber, J., & Wertenbroch, K. (2005). When do losses loom larger than gains?. *Journal of Marketing Research*, 42(2), 134-138.

Arndt, J. (1972). Intrafamilial homogeneity for perceived risk and opinion leadership. *Journal of Advertising*, 1, 40-47.

Arora, R. (2008). Price bundling and framing strategies for complementary products. *Journal of Product & Brand Management*, 17(7), 475-484.

- Asch, S. E. (1958). Review of L. Festinger, A theory of cognitive dissonance. *Contemporary psychology*, 3, 194-195.
- Awunyo-Vitor, D., Ayimey, E. K., & Gayibor, R. A. (2013). Does sales promotion influence buyer behaviour? A study of PZ cussions limited.
- Aydinli, A., Bertini, M., & Lambrecht, A. (2014). Price promotion for emotional impact. *Journal of Marketing*, 78(4), 80-96.
- Ayres, I., & Nalebuff, B. (2003). In praise of honest pricing. *MIT Sloan Management Review*, 45(1), 24.
- Badrinarayanan, V., & Laverie, D. A. (2011). Brand advocacy and sales effort by retail salespeople: Antecedents and influence of identification with manufacturers' brands. *Journal of Personal Selling & Sales Management*, 31(2), 123-140.
- Bain, X., & Moutinho, L. (2011). The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits. *European Journal of Marketing*, 45(1/2), 191-216.
- Bakan, D. (1966). The test of significance in psychological research. *Psychological bulletin*, 66(6), 423.
- Baker, M. J., & Churchill Jr, G. A. (1977). The impact of physically attractive models on advertising evaluations. *Journal of Marketing research*, 538-555.
- Bakewell, C., & Mitchell, V. W. (2003). Generation Y female consumer decision-making styles. *International Journal of Retail & Distribution Management*, 31(2), 95-106.
- Bakewell, C., & Mitchell, V. W. (2004). Male consumer decision-making styles. *The International Review of Retail, Distribution and Consumer Research*, 14(2), 223-240.
- Bakos, Y., & Brynjolfsson, E. (2000). Bundling and Competition on the Internet. *Marketing science*, 19(1), 63-82.



- Balaji, M. S., Raghavan, S., & Jha, S. (2011). Role of tactile and visual inputs in product evaluation: a multisensory perspective. *Asia Pacific Journal of Marketing and Logistics*, 23(4), 513-530.
- Barbarossa, C., & De Pelsmacker, P. (2016). Positive and negative antecedents of purchasing eco-friendly products: A comparison between green and non-green consumers. *Journal of Business Ethics*, 134(2), 229-247.
- Barone, M. J., & Roy, T. (2010). Does exclusivity always pay off? Exclusive price promotions and consumer response. *Journal of Marketing*, 74(2), 121-132.
- Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences*, 42(5), 815-824.
- Bartels, D. M., & Johnson, E. J. (2015). Connecting cognition and consumer choice. *Cognition*, 135, 47-51.
- Batra, R., Ahuvia, A., & Bagozzi, R. P. (2012). Brand love. *Journal of Marketing*, 76(2), 1-16.
- Baumann, N., & Kuhl, J. (2002). Intuition, affect, and personality: unconscious coherence judgments and self-regulation of negative affect. *Journal of Personality and Social Psychology*, 83(5), 1213.
- Baumgartner, H. (2002). Toward a personology of the consumer. *Journal of Consumer Research*, 29(2), 286-292.
- Bawa, K., & Shoemaker, R. (1987a). The coupon-prone consumer: Some findings based on purchase behavior across product classes. *Journal of Marketing*, 51, 99-110.
- Bawa, K., & Shoemaker, R. (1987b). The effects of a direct mail coupon on brand choice behavior. *Journal of Marketing Research*, 24, 330-376.
- Bawa, K., & Shoemaker, R. (1989). Analyzing incremental sales from a direct mail coupon promotion. *Journal of Marketing*, 53, 66-78.
- Baye, M. R., Morgan, J. & Scholten, P. (2004). Price Dispersion in the Small and the Large: Evidence from an Internet Price Comparison Site. *Journal of Industrial Economics*, 52(4), 463-496.

- Beach, L. R., & Mitchell, T. R. (1978). A contingency model for the selection of decision strategies. *Academy of management review*, 3(3), 439-449.
- Beall, S., Carter, C., Carter, P. L., Germer, T., Hendrick, T., Jap, S., ... & Petersen, K. (2003). The role of reverse auctions in strategic sourcing. *CAPS research*.
- Bearden, W. O., Lichtenstein, D. R. & Teel, J. E. (1984). Comparison of Price, Coupon, and Brand Effects on Consumer Reactions to Retail Newspaper Advertisements. *Journal of Retailing*, 60(2), 11-34.
- Beharrell, B., & Denison, T. J. (1995). Involvement in a routine food shopping context. *British Food Journal*, 97(4), 24-29.
- Belch, G. E., & Belch, M. A. (2012). *Advertising and promotion: an integrated marketing communication perspective*. (9th ed.). New York: McGraw Hill.
- Bell, D. R., Chiang, J., & Padmanabhan, V. (1999). The decomposition of promotional response: An empirical generalization. *Marketing Science*, 18(4), 504-526.
- Bell, D. R., Corsten, D., & Knox, G. (2011). From point of purchase to path to purchase: How preshopping factors drive unplanned buying. *Journal of Marketing*, 75(1), 31-45.
- Bell, D. R., Ho, T. H., & Tang, C. S. (1998). Determining where to shop: Fixed and variable costs of shopping. *Journal of Marketing Research*, 352-369.
- Belsky, G., & Gilovich, T. (1999). Why smart people make big money mistakes and how to avoid them.
- Bergkvist, L., & Bech-Larsen, T. (2010). Two studies of consequences and actionable antecedents of brand love. *Journal of Brand Management*, 17(7), 504-518.
- Berling, P., & Martínez-de-Albéniz, V. (2011). Optimal inventory policies when purchase price and demand are stochastic. *Operations Research*, 59(1), 109-124.
- Bernheim, D. (1995). Do households appreciate their financial vulnerabilities? An analysis of actions, perceptions, and public policy. *Tax policy and economic growth*, 3, 11-13.

Bernheim, D. D. (1998). Financial illiteracy, education, and retirement saving (No. 96-7). Wharton School Pension Research Council, University of Pennsylvania.

Bertini, M. and Wathieu, L. (2008), "Attention arousal through price partitioning", *Marketing Science*, Vol. 27 No. 2, pp. 236-246.

Bertini, M., Ofek, E. & Ariely, D. (2009). The impact of add-on features on consumer product evaluations. *Journal of Consumer Research*, 36(1), 17-28.

Bettman, J. R., & Park, C. W. (1980). Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: A protocol analysis. *Journal of consumer research*, 7(3), 234-248.

Bettman, J. R., Johnson, E. J., & Payne, J. W. (1991). Consumer decision making. *Handbook of consumer behavior*, 44(2), 50-84.

Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of consumer research*, 25(3), 187-217.

Bhasin, M. L. (2006). Guarding privacy on the Internet. *Global Business Review*, 7(1), 137-156.

Bian, X., & Moutinho, L. (2011). The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects. *European Journal of Marketing*, 45(1/2), 191-216.

Biswas, A. (1992). The Moderating Role of Brand Familiarity in Reference Price Perceptions. *Journal of Business Research*, 25(3), 251-262.

Biswas, A. & Blair, E. A. (1991). Contextual Effects of Reference Prices in Retail Advertisements. *Journal of Marketing*, 55(3), 1-12.

Biswas, A., & Sherrell, D.L. (1993). The influence of product knowledge and brand name on internal price standards and confidence. *Psychology and Marketing*, 10(1), 31-46.

Biswas, A., Wilson, E. J. & Licata, J. W. (1993). Reference Pricing Studies in Marketing: A Synthesis of Research Results. *Journal of Business Research*, 27(3), 239-256.

Blackwell, M. (2006). Engel (2006). *Consumer Behaviour*, 10.

Blackwell, R. D. Miniard, P. W., and Engel, J. F. (2001). *Consumer Behavior*. Forth Worth, TX: Harcourt College Publisher.

Blair, E. A. & Landon, E. L. J. (1981). The Effects of Reference Prices in Retail Advertisements. *Journal of Marketing*, 45(2), 61-69.

Blair, E. A., Harris, J. & Monroe, K. B. (2002). Effects of shopping information on consumers' responses to comparative price claims. *Journal of Retailing*, 78(3), 175-181.

Blattberg, R. C., & Neslin, S. A. (1990). Sales promotion: Concepts, methods, and strategies (pp. 349-350). Englewood Cliffs, NJ: Prentice Hall.

Blattberg, R. C., Briesch, R., & Fox, E. J. (1995). How promotions work. *Marketing science*, 14(3\_supplement), G122-G132.

Blattberg, R., Buesing, T., Peacock, P. and Sen, S. (1978), "Identifying the deal prone segment", *Journal of Marketing Research*, Vol. 15, pp. 369-77.

Blattberg, R., Buesing, T., Peacock, P., & Sen, S. (2010). Identifying the deal prone segment. In *Perspectives On Promotion And Database Marketing: The Collected Works of Robert C Blattberg* (pp. 79-87).

Bloxham, M. (1998). Brand affinity & television programme sponsorship. *International Journal of Advertising*, 17(1), 89-98.

Blut, M., Beatty, S. E., Evanschitzky, H., & Brock, C. (2014). The impact of service characteristics on the switching costs–customer loyalty link. *Journal of Retailing*, 90(2), 275-290.

Bodnaruk, A., O'Brien, W., & Simonov, A. (2012). Captive Finance and Firm's Competitiveness.

Bolton, R. N., Shankar, V., & Montoya, D. Y. (2010). Recent trends and emerging practices in retailer pricing. In M. Krafft & M. K. Mantrala (Eds.), *Retailing in the 21st century. Current and future trends* (pp. 245–359). Berlin: Springer-Verlag.

Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological bulletin*, 119(1), 111.

Boomsma, A. (2000). Reporting analyses of covariance structures. *Structural equation modeling*, 7(3), 461-483.

Bornemann, T., & Homburg, C. (2011). Psychological distance and the dual role of price. *Journal of Consumer Research*, 38(3), 490-504.

Bove, L., & Mitzifiris, B. (2007). Personality traits and the process of store loyalty in a transactional prone context. *Journal of Services Marketing*, 21(7), 507-519.

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty?. *Journal of marketing*, 73(3), 52-68.

Brassington, F., & Pettitt, S. (2000). *Principles of Marketing*. 2002. Financial Times/Prentice Hall, ISBN, 273644440.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

Braunstein, S., & Welch, C. (2002). Financial literacy: An overview of practice, research, and policy. *Fed. Res. Bull.*, 88, 445.

Broniarczyk, S. M., & Alba, J. W. (1994). The role of consumers' intuitions in inference making. *Journal of Consumer Research*, 21(3), 393-407.

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). *Competing in the age of omnichannel retailing*. MIT.

Burman, B., & Biswas, A. (2004). Reference prices in retail advertisements: moderating effects of market price dispersion and need for cognition on consumer value perception and shopping intention. *Journal of Product & Brand Management*, 13(6), 379-389.

Burman, B., & Biswas, A. (2007). Partitioned pricing: Can we always divide and prosper?. *Journal of Retailing*, 83(4), 423-436.

- Burnham, T. A., Frels, J. K., & Mahajan, V. (2003). Consumer switching costs: a typology, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 31(2), 109-126.
- Burton, S., Lichtenstein, D. R. & Herr, P. M. (1993). An Examination of the Effects of Information Consistency and Distinctiveness in a Reference Price Advertising Context. *Journal of Applied Social Psychology*, 23(24), 2074-2092.
- Cacioppo, J. T., Petty, R. E., & Kao, C. F. (1984). The efficient assessment of need for cognition. *Journal of Personality Assessment*, 48(3), 306-307
- Cacioppo, J. T., Petty, R. E., Feinstein, J. A., & Jarvis, W. B. G. (1996). Dispositional differences in cognitive motivation: The life and times of individuals varying in need for cognition. *Psychological bulletin*, 119(2), 197.
- Cai, Y., Cude, R. and Swagler, R. (2004), "Country-of-origin effects on consumers' willingness to buy foreign products: an experiment in consumer decision making", *Consumer Interests Annual*, Vol. 50, pp. 98-105.
- Campbell, J. B., & Heller, J. F. (1987). Correlations of extraversion, impulsivity and sociability with sensation seeking and MBTI-introversion. *Personality and Individual Differences*, 8(1), 133-136.
- Carlson, J.P., Weathers, D., 2008. Examining differences in consumer reactions to partitioned prices with a variable number of price components. *J. Bus. Res.* 61 (7), 724–731.
- Carlton, D. W., & Waldman, M. (2002). The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries, 33 *RAND J. Econ*, 194, 215-16.
- Carnevale, J. J., Inbar, Y., & Lerner, J. S. (2011). Individual differences in need for cognition and decision-making competence among leaders. *Personality and Individual Differences*, 51(3), 274-278.
- Carroll, B. A., & Ahuvia, A. C. (2006). Some antecedents and outcomes of brand love. *Marketing letters*, 17(2), 79-89.
- Cavusgil, E., & Kim, D. (2014). Hedonic vs. Utilitarian Perspective of Retail Store Loyalty: Insights from a National Study of Households. *Kilts Booth Marketing Series Paper*, (1-02

- Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing: effects of source credibility, argument ambiguity, and task importance on attitude judgment. *Journal of personality and social psychology*, 66(3), 460.
- Chamorro-Premuzic, T., & Furnham, A. (2003). Personality predicts academic performance: Evidence from two longitudinal university samples. *Journal of research in personality*, 37(4), 319-338.
- Chandon, P. (1995), "Consumer research on sales promotions: a state-of-art literature review", *Journal of Marketing Management*, Vol. 11, pp. 419-41.
- Chandon, P., Morwitz, V. G., & Reinartz, W. J. (2005). Do intentions really predict behavior? Self-generated validity effects in survey research. *Journal of Marketing*, 69(2), 1-14.
- Chandon, P., Wansink, B., & Laurent, G. (2000). A benefit congruency framework of sales promotion effectiveness. *Journal of marketing*, 64(4), 65-81.
- Chandran, S. and Morwitz, V. G. (2006). The Price of 'Free'-dom: Consumer Sensitivity to Promotions with Negative Contextual Influences. *Journal of Consumer Research*, 33(3), 384- 392.
- Chandrashekar, R. (2012). Consumers' utilization of reference prices: the moderating role of involvement. *Journal of Product & Brand Management*, 21(1), 53-60.
- Chandrashekar, R., & Grewal, D. (2006). Anchoring effects of advertised reference price and sale price: The moderating role of saving presentation format. *Journal of Business Research*, 69(10-11), 1063-1071.
- Chang, E. C., Lv, Y., Chou, T. J., He, Q., & Song, Z. (2014). Now or later: Delay's effects on post-consumption emotions and consumer loyalty. *Journal of Business Research*, 67(7), 1368-1375.
- Chen, H., Marmorstein, H., Tsiros, M., Rao, A.R., (2012). When more is less: the impact of base value neglect on consumer preferences for bonus packs over price discounts. *J. Mark.* 76 (4), 64-77.

Chen, K., Newell, S. J., Kou, G., Zhang, L., & Li, C. H. (2017). Effective strategies for developing meaningful names and associations for co-branded products in new and emerging markets. *Journal of Brand Management*, 24(4), 362-374.

Chen, M. F., & Lu, T. Y. (2011). Modeling e-coupon proneness as a mediator in the extended TPB model to predict consumers' usage intentions. *Internet Research*, 21(5), 508-526.

Chen, S. H., & Lee, K. P. (2008). The role of personality traits and perceived values in persuasion: An elaboration likelihood model perspective on online shopping. *Social Behavior and Personality: an international journal*, 36(10), 1379-1399.

Cheng, H., & Furnham, A. (2014). The associations between parental socio-economic conditions, childhood intelligence, adult personality traits, social status and mental well-being. *Social indicators research*, 117(2), 653-664.

Chernev, A. & Wheeler, S. C. (2003). The role of reference points in evaluating price information. *Advances in Consumer Research*, 30(1), 305-308.

Chiu, C. M., Wang, E. T., Fang, Y. H., & Huang, H. Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85-114.

Cho, E. K., Khan, U., & Dhar, R. (2013). Comparing apples to apples or apples to oranges: The role of mental representation in choice difficulty. *Journal of Marketing Research*, 50(4), 505-516.

Chou, C. P., & Bentler, P. M. (1995). Estimates and tests in structural equation modeling.

Choudrie, J., & Dwivedi, Y. K. (2005). The demographics of broadband residential consumers in a British local community: The London borough of Hillingdon. *Journal of Computer Information Systems*, 45(4), 93-101.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: recycling the concept of norms to reduce littering in public places. *Journal of personality and social psychology*, 58(6), 1015.



Claiborne, C. B., & Sirgy, M. J. (2015). Self-image congruence as a model of consumer attitude formation and behavior: A conceptual review and guide for future research. In *Proceedings of the 1990 academy of marketing science (AMS) annual conference* (pp. 1-7). Springer, Cham.

Clark, R., & d'Ambrosio, M. (2008). Adjusting retirement goals and saving behavior: The role of financial education. Overcoming the saving slump: How to increase the effectiveness of financial education and saving programs, 237-256.

Coelho, P. S., Rita, P., & Santos, Z. R. (2018). On the relationship between consumer-brand identification, brand community, and brand loyalty. *Journal of Retailing and Consumer Services*, 43, 101-110.

Coelho, P. S., Rita, P., & Santos, Z. R. (2018). On the relationship between consumer-brand identification, brand community, and brand loyalty. *Journal of Retailing and Consumer Services*, 43, 101-110.

Cole, C. A., & Balasubramanian, S. K. (1993). Age differences in consumers' search for information: Public policy implications. *Journal of Consumer Research*, 20(1), 157-169.

Coleman, D. A., de Chernatony, L., & Christodoulides, G. (2015). B2B service brand identity and brand performance: an empirical investigation in the UK's B2B IT services sector. *European Journal of Marketing*, 49(7/8).

Coleman, J. S., & Fararo, T. J. (1992). *Rational choice theory*. Nueva York: Sage.

Connor, H., Dewson, S., Tyers, C., Eccles, J., Regan, J., & Aston, J. (2001). Social class and higher education: issues affecting decisions on participation by lower social class groups.

Cooke, A. D., Janiszewski, C., Cunha Jr, M., Nasco, S. A., & De Wilde, E. (2004). Stimulus context and the formation of consumer ideals. *Journal of Consumer Research*, 31(1), 112-124.

Cooke, A. D., Meyvis, T., & Schwartz, A. (2001). Avoiding future regret in purchase-timing decisions. *Journal of Consumer Research*, 27(4), 447-459.

Corstjens, M., & Lal, R. (2000). Building store loyalty through store brands. *Journal of Marketing Research*, 37(3), 281-291.

Coventry, K. R., & Brown, R. I. F. (1993). Sensation seeking, gambling and gambling addictions. *Addiction*, 88(4), 541–554.

Crompton, J. L. (2015). Reference price based strategies: a key to raising revenues without alienating users. *Managing Sport and Leisure*, 20(5), 275-292.

D'Agostino, P. R., & Fincher-Kiefer, R. (1992). Need for cognition and the correspondence bias. *Social Cognition*, 10(2), 151.

Danaher, P. J., Wilson, I. W., & Davis, R. A. (2003). A comparison of online and offline consumer brand loyalty. *Marketing Science*, 22(4), 461-476.

Danes, S. M., & Haberman, H. (2007). Teen financial knowledge, self-efficacy, and behavior: A gendered view. *Journal of Financial Counseling and Planning*, 18(2).

Darke, P. R. & Chung, C. M. Y. (2005). Effects of pricing and promotion on consumer perception: It depends on how you frame it. *Journal of Retailing*, 81(1), 35-47.

Darke, P. R., & Freedman, J. L. (1995). Nonfinancial motives and bargain hunting 1. *Journal of Applied Social Psychology*, 25(18), 1597-1610.

Darke, P.R. and D.W. Dahl, 2003. Fairness and discounts: The subjective value of a bargain. *J. Consum. Psychol.*, 13(3): 328-338.

Darke, P.R., & Freedman, J. (1993). Deciding whether to seek a bargain: Effects of both amount and percentage off. *Journal of Applied Psychology*, 78(6), 960–965.

Davidson, J. E., & Hendry, D. F. (1981). Interpreting econometric evidence: the behaviour of consumers' expenditure in the UK. *European Economic Review*, 16(1), 177-192.

Davies, G., & Bell, J. (1991). The grocery shopper-is he different?. *International Journal of Retail & Distribution Management*, 19(1).

Davis, C., Patte, K., Tweed, S., & Curtis, C. (2007). Personality traits associated with decision-making deficits. *Personality and Individual Differences*, 42(2), 279-290.

Davis, H. L. (1976). Decision making within the household. *Journal of consumer research*, 2(4), 241-260.

Dawes, J., Meyer-Waarden, L., & Driesener, C. (2015). Has brand loyalty declined? A longitudinal analysis of repeat purchase behavior in the UK and the USA. *Journal of Business Research*, 68(2), 425-432.

Dawes, R. M. (1979). The robust beauty of improper linear models in decision making. *American psychologist*, 34(7), 571.

Day, D., Gan, B., Gendall, P., & Esslemont, D. (1991). Predicting purchase behaviour. *Marketing Bulletin*, 2(5), 18-30.

de Bussy, N. M., Pitt, L. F., Low, S. S., Murgolo-Poore, M., & Samouel, P. (2015). The Internet, Role Overload and Convenience Consumption: Evidence from Australia. In *New Meanings for Marketing in a New Millennium* (pp. 251-256). Springer International Publishing.

Deck, C., & Jahedi, S. (2015). The effect of cognitive load on economic decision making: A survey and new experiments. *European Economic Review*, 78, 97-119.

Degeratu, A. M., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing*, 17(1), 55-78.

Dell, R. B., Holleran, S., & Ramakrishnan, R. (2002). Sample size determination. *ILAR journal*, 43(4), 207-213.

Della Bitta, A. J., & Norberg, P. A. (2013). Price Discount Perception: Consumers' Numeric Interpretation of Semantic Price Claims.

Della Bitta, A. J., Monroe, K. B. & McGinnis, J. M. (1981). Consumer Perceptions of Comparative Price Advertisements. *Journal of Marketing Research*, 18(4), 416-427.

DelVecchio, D. (2005), "Deal-prone consumers' response to promotion: the effects of relative and absolute promotion value", *Psychology & Marketing*, Vol. 22 No. 5, pp. 373-91.

DelVecchio, D., & Craig, A. W. (2008). Mode matters: an exemplar-prototype hybrid (EPH) model of reference price formation. *Journal of Product & Brand Management*, 17(4), 272-279.

DelVecchio, D., Henard, D. H., & Freling, T. H. (2006). The effect of sales promotion on post-promotion brand preference: A meta-analysis. *Journal of Retailing*, 82(3), 203-213.

DelVecchio, D., Krishnan, H. S., & Smith, D. C. (2004). Cents or percent? Promotion framing and consumer price expectations. Working paper, University of Kentucky.

Demby, E. (2011). *Psychographics and from whence it came*. Marketing Classics Press.

Deshpande, R., & Webster Jr, F. E. (1989). Organizational culture and marketing: defining the research agenda. *The journal of marketing*, 3-15.

Dewberry, C., Juanchich, M., & Narendran, S. (2013). Decision-making competence in everyday life: The roles of general cognitive styles, decision-making styles and personality. *Personality and Individual Differences*, 55(7), 783-788.

Dhar, R., & Kim, E. Y. (2007). Seeing the forest or the trees: Implications of construal level theory for consumer choice. *Journal of Consumer Psychology*, 17(2), 96-100.

Dhar, R., & Nowlis, S. M. (1999). The effect of time pressure on consumer choice deferral. *Journal of Consumer Research*, 25(4), 369-384.

Dhar, S. K., Gonzalez-Vallejo, C., & Soman, D. (1995). Brand promotions as a lottery. *Marketing Letters*, 6(3), 221-233.

Dholakia, U. M. (2001). A motivational process model of product involvement and consumer risk perception. *European Journal of marketing*, 35(11/12), 1340-1362.

Diamond, W. D., & Campbell, L. (1989). The framing of sales promotions: effects on reference price change. *ACR North American Advances*.

Diamond, W.D., & Johnson, R.R. (1990). The framing of sales promotions: An approach to classification. In M.E. Goldberg, G. Gorn, & R. V. Pollay (Eds.), *Advances in consumer research* (Vol. 17; pp. 494–500). Provo, UT: Association for Consumer Research.

Diamond, W.D., & Sanyal, A. (1990). The effect of framing on choice of supermarket coupons. *Advances in Consumer Research*, 17, 494–500

Dickhäuser, O., & Reinhard, M. A. (2006). Factors underlying expectancies of success and achievement: The influential roles of need for cognition and general or specific self-concepts. *Journal of Personality and Social Psychology*, 90(3), 490.

Dickinger, A., & Kleijnen, M. (2008). Coupons going wireless: Determinants of consumer intentions to redeem mobile coupons. *Journal of interactive marketing*, 22(3), 23-39.

Dickson, P. R. & Sawyer, A. G. (1990). The Price Knowledge and Search of Supermarket Shoppers. *Journal of Marketing*, 54(3), 42-53.

Dijksterhuis, A., & Nordgren, L.F. (2006). A theory of unconscious thought. *Perspectives on Psychological Science*, 1(2), 95-109.

Dittmar, H. (2004). Understanding and diagnosing compulsive buying. *Handbook of addictive disorders: A practical guide to diagnosis and treatment*, 411-450.

Dodson, J., Alice, T., & Brian, S. (1978). Impact of deals and deal retraction on brand switching. *Journal of Marketing Research*, 15, 72–81.

Doob, A., Carlsmith, J.M., Freedman, J.L., Landauer, T.K., & Soleng, T. (1969). Effect of initial selling price on subsequent sales. *Journal of Personality and Social Psychology*, 11, 345–350.

Dotson, M. J. (2001). Sales Promotion Preferences: A Demographic Analysis. [Online] Available: <http://www.sbaer.uca.edu/research/sma/2001/07.pdf> (August 7, 2009).

Doyle, J. (1999). Rational decision making. *MIT encyclopedia of the cognitive sciences*, 701-703.

Drolet, A., & Frances Luce, M. (2004). The rationalizing effects of cognitive load on emotion-based trade-off avoidance. *Journal of Consumer Research*, 31(1), 63-77.

Du Plessis, F., Cook, G., Van Heerden, N., Van Rooyen, R., Mulder, D., Du Plessis, L., Franck, A., & Muir, C. (2010). *Integrated marketing communication: a contemporary approach*. (3rd ed.). Pretoria: Van Schaik.

Dudley, N. M., Orvis, K. A., Lebiecki, J. E., & Cortina, J. M. (2006). A meta-analytic investigation of conscientiousness in the prediction of job performance: Examining the intercorrelations and the incremental validity of narrow traits. *Journal of Applied Psychology*, 91(1), 40.

Durvasula, S., Lysonski, S., & Andrews, J. C. (1993). Cross-cultural generalizability of a scale for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 27(1), 55-65.

Eberly, J. C. (1994). Adjustment of consumers' durables stocks: Evidence from automobile purchases. *Journal of Political Economy*, 403-436

Einhorn, H. J., & Hogarth, R. M. (1981). Behavioral decision theory: Processes of judgement and choice. *Annual review of psychology*, 32(1), 53-88.

Elliott, G. R., & Cameron, R. C. (1994). Consumer perception of product quality and the country-of-origin effect. *Journal of international Marketing*, 49-62.

Elzinga, D., Mulder, S., & Vetvik, O. J. (2009). The consumer decision journey. *McKinsey Quarterly*, 3, 96-107.

Engel, J. F., Kollat, D. T., & Blackwell, R. D. (1973). *Consumer behavior*. New York: holt, rinehart and winston. *Inc. Engel2Consumer Behavior1973*.

Epley, N., & Gilovich, T. (2006). The anchoring-and-adjustment heuristic: Why the adjustments are insufficient. *Psychological science*, 17(4), 311-318.

Epstein, S., Pacini, R., Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive-experiential and analytical-rational thinking styles. *Journal of personality and social psychology*, 71(2), 390.

Erdem, T., Keane, M. P., & Sun, B. (2008). A dynamic model of brand choice when price and advertising signal product quality. *Marketing Science*, 27(6), 1111-1125.

Ericsson, K. A. (2006). The influence of experience and deliberate practice on the development of superior expert performance. *The Cambridge handbook of expertise and expert performance*, 38, 685-705.

- Estelami, H. (2003), "The effect of price presentation tactics on consumer evaluation effort of multi-dimensional prices", *Journal of Marketing Theory and Practice*, Vol. 11 No. 2, pp. 1-16.
- Estelami, H., & De Maeyer, P. (2004). Product category determinants of price knowledge for durable consumer goods. *Journal of Retailing*, 80(2), 129-137.
- Estelami, H., Lehmann, D. R., & Holden, A. C. (2001). Macro-economic determinants of consumer price knowledge: A meta-analysis of four decades of research. *International Journal of Research in Marketing*, 18(4), 341-355.
- Evans, J.St.B.T. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. *Annual Review of Psychology*, 59, 255-278.
- Evans, J.St.B.T., & Stanovich, K.E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science*, 8(3), 225-278.
- Fader, P. S., & McAlister, L. (1990). An elimination by aspects model of consumer response to promotion calibrated on UPC scanner data. *Journal of Marketing Research*, 322-332.
- Farris, R., Chong, F., & Danning, D. (2002). Generation Y: Purchasing power and implications for marketing. *Academy of Marketing Studies Journal*, 6(1-2), 89.
- Feldman, J. M., & Lynch, J. G. (1988). Self-generated validity and other effects of measurement on belief, attitude, intention, and behavior. *Journal of applied Psychology*, 73(3), 421.
- Ferreira, A. G., & Coelho, F. J. (2015). Product involvement, price perceptions, and brand loyalty. *Journal of Product & Brand Management*, 24(4), 349-364.
- Ferrell, O. C., & Hartline, M. D. (2008). *Marketing Strategy*, (4th ed.). Mason: Thomson South-Western. Field, A. (2009). *Discovering statistics using SPSS*. (3rd ed.). London: Sage.
- Fetscherin, M., & Heilmann, T. (2015). Brand relationships rule. In *Consumer Brand Relationships* (pp. 1-12). Palgrave Macmillan UK.
- Fishbein, M. and Ajzen, I. (1975), *Beliefs, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, Addison Wesley, New York, NY.

Flight, R. L., & Sacramento, D. (2015). Brand attachment and the compulsive buyer. *International Journal of Academic Research in Business and Social Sciences*, 5(8), 157-171.

Folkes, V. and Wheat, R.D. (1995), "Consumers' price perceptions of promoted products", *Journal of Retailing*, Vol. 71 No. 3, pp. 317-328.

Foubert, B. & Gijsbrechts, E. (2007). Shopper response to bundle promotions for packaged goods. *Journal of Marketing Research*, 44(4), 647-662.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of consumer research*, 24(4), 343-373.

Fox, J., Bartholomae, S., & Lee, J. (2005). Building the case for financial education. *Journal of consumer affairs*, 39(1), 195-214.

Franken, I. H., van Strien, J. W., Nijs, I., & Muris, P. (2008). Impulsivity is associated with behavioral decision-making deficits. *Psychiatry research*, 158(2), 155-163.

Frankenberger, K. D., & Liu, R. (1994). Does consumer knowledge affect consumer responses to advertised reference price claims?. *Psychology and Marketing*, 11(3), 235.

Frederick, S. (2005). Cognitive reflection and decision making. *Journal of Economic perspectives*, 19(4), 25-42.

Frederiks, E. R., Stenner, K., & Hobman, E. V. (2015). Household energy use: Applying behavioural economics to understand consumer decision-making and behaviour. *Renewable and Sustainable Energy Reviews*, 41, 1385-1394.

Freedman, J.L. and Fraser, S.C. (1966), "Compliance without pressure: the foot-in-the-door technique", *Journal of Personality and Social Psychology*, Vol. 4 No. 2, pp. 195-202.

Frey, R., Mata, R., & Hertwig, R. (2015). The role of cognitive abilities in decisions from experience: Age differences emerge as a function of choice set size. *Cognition*, 142, 60-80.

Friedman, M. (1953). *The methodology of positive economics*.



Furnham, A., & Boo, H. C. (2011). A literature review of the anchoring effect. *The Journal of Socio-Economics*, 40(1), 35-42.

Furnham, A., & Thorne, J. D. (2013). Need for cognition. *Journal of Individual Differences*.

Gabaix, X. and Laibson, D. (2006), "Shrouded attributes, consumer myopia, and information suppression in competitive markets", *Quarterly Journal of Economics*, Vol. 121 No. 2, pp. 505-540.

Gamliel, E., & Herstein, R. (2011). To save or to lose: does framing price promotion affect consumers' purchase intentions? *Journal of Consumer Marketing*, 28(2), 152-158.

Garbarino, E., & Slonim, R. (2003). Interrelationships and distinct effects of internal reference prices on perceived expensiveness and demand. *Psychology & Marketing*, 20(3), 227-248.

Gázquez-Abad, J. C., Martínez-López, F. J., & Barrales-Molina, V. (2014). Profiling the flyer-prone consumer. *Journal of Retailing and Consumer Services*, 21(6), 966-975.

George, D., & Mallery, P. (2010). *SPSS for Windows step by step. A simple study guide and reference* (10. Bask1).

Gerbing, D. W., & Anderson, J. C. (1993). Monte Carlo evaluations of goodness-of-fit indices for structural equation models. *Sage focus editions*, 154, 40-40.

Gigerenzer, G. (2007). *Gut feelings: The intelligence of the unconscious*. Penguin.

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual review of psychology*, 62, 451-482.

Gigerenzer, G., & Selten, R. (2002). *Bounded rationality: The adaptive toolbox*. MIT press.

Gilbride, T. J., Inman, J. J., & Stille, K. M. (2015, April). The role of within-trip dynamics in unplanned versus planned purchase behavior. *American Marketing Association*.

Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: an extended technology acceptance perspective. *Information & management*, 39(8), 705-719.

Gilligan, C. (1982). In a different voice. *Psychological theory and women's development*.

- Gilly, M. C., & Gelb, B. D. (1982). Post-purchase consumer processes and the complaining consumer. *Journal of Consumer Research*, 9(3), 323-328.
- Glaeser, E. L., Kolko, J., & Saiz, A. (2001). Consumer city. *Journal of economic geography*, 1(1), 27-50.
- Glaser, T., & Walther, E. (2013). Two in one conditioning? The role of valence in concept learning. *Learning and Motivation*, 44(3), 174-183.
- Glöckner, A., & Witteman, C. (2010). Beyond dual-process models: A categorisation of processes underlying intuitive judgement and decision making. *Thinking & Reasoning*, 16(1), 1-25.
- Gneezy, U., List, J. A., & Wu, G. (2006). The uncertainty effect: When a risky prospect is valued less than its worst possible outcome. *Quarterly Journal of Economics*, 121(4), 1283–1309.
- Godey, B., Pederzoli, D., Aiello, G., Donvito, R., Chan, P., Oh, H., ... & Weitz, B. (2012). Brand and country-of-origin effect on consumers' decision to purchase luxury products. *Journal of Business Research*, 65(10), 1461-1470.
- Goldsmith, K., & Amir, O. (2010). Can uncertainty improve promotions? *Journal of Marketing Research*, 47(6), 1070–1077.
- Gómez, M., Martín-Consuegra, D., & Molina, A. (2015). The importance of packaging in purchase and usage behaviour. *International Journal of Consumer Studies*, 39(3), 203-211.
- Goodman, J. K., & Malkoc, S. A. (2012). Choosing here and now versus there and later: The moderating role of psychological distance on assortment size preferences. *Journal of Consumer Research*, 39(4), 751-768.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality*, 37, 504-528
- Grewal, D., & Monroe, K.B. (1998). The effect of price comparison advertising on buyers' perception of acquisition value, transaction value and behavioral intentions. *Journal of Marketing*, 62, 46–60.

- Grewal, D., Ailawadi, K. L., Gauri, D., Hall, K., Kopalle, P., & Robertson, J. R. (2011). Innovations in retail pricing and promotions. *Journal of Retailing*, 87, S43-S52.
- Grubb, M. D. (2015). Overconfident consumers in the marketplace. *Journal of Economic Perspectives*, 29(4), 9-36.
- Guido, G. (2006). Shopping motives, big five factors, and the hedonic/utilitarian shopping value: An integration and factorial study. *Innovative Marketing*, 2(2), 57-67.
- Gupta, S., & Cooper, L.G. (1992). The discounting of discounts and promotion thresholds. *Journal of Consumer Research*, 19(3), 401-411.
- Haddock, G., Maio, G. R., Arnold, K., & Huskinson, T. (2008). Should persuasion be affective or cognitive? The moderating effects of need for affect and need for cognition. *Personality and Social Psychology Bulletin*, 34(6), 769-778.
- Hamilton, R. W., & Srivastava, J. (2008). When 2+ 2 is not the same as 1+ 3: Variations in price sensitivity across components of partitioned prices. *Journal of Marketing Research*, 45(4), 450-461.
- Hammond, P. J. (1987). Markets as constraints: multilateral incentive compatibility in continuum economies. *The Review of Economic Studies*, 54(3), 399-412.
- Hamzaoui Essoussi, L., & Zahaf, M. (2009). Exploring the decision-making process of Canadian organic food consumers: Motivations and trust issues. *Qualitative Market Research: An International Journal*, 12(4), 443-459.
- Han, S., Lerner, J. S., & Keltner, D. (2007). Feelings and consumer decision making: The appraisal-tendency framework. *Journal of consumer psychology*, 17(3), 158-168.
- Harris, C., Straker, L., & Pollock, C. (2013). The influence of age, gender and other information technology use on young people's computer use at school and home. *Work*, 44(Supplement 1), 61-71.
- Harris, L. C., & Goode, M. M. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of retailing*, 80(2), 139-158.

- Hassan Al-Tamimi, H. A., & Anood Bin Kalli, A. (2009). Financial literacy and investment decisions of UAE investors. *The Journal of Risk Finance*, 10(5), 500-516.
- Häubl, G., & Trifts, V. (2000). Consumer decision making in online shopping environments: The effects of interactive decision aids. *Marketing science*, 19(1), 4-21.
- Haugtvedt, C. P., Petty, R. E., & Cacioppo, J. T. (1992). Need for cognition and advertising: Understanding the role of personality variables in consumer behavior. *Journal of Consumer Psychology*, 1(3), 239-260.
- Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of consumer marketing*, 17(5), 403-426.
- Heath, C., & Soll, J. B. (1996). Mental budgeting and consumer decisions. *Journal of consumer research*, 23(1), 40-52.
- Heeler, R. M., Nguyen, A. & Buff, C. (2007). Bundles=Discount? Revisiting complex theories of bundle effects. *Journal of Product & Brand Management*, 16(7), 492-500.
- Heil, O. P., & Helsen, K. (2001). Toward an understanding of price wars: Their nature and how they erupt. *International Journal of Research in Marketing*, 18(1-2), 83-98.
- Helgeson, J. G., & Beatty, S. E. (1985). An information processing perspective on the internalization of price stimuli. *ACR North American Advances*.
- Helgeson, J. G., & Beatty, S. E. (1987). Price expectation and price recall error: an empirical study. *Journal of Consumer Research*, 14(3), 379-386.
- Helson, H. (1964), *Adaptation-level Theory*, Harper & Row, New York, NY.
- Herabadi, A. G., Verplanken, B., & Van Knippenberg, A. (2009). Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. *Asian Journal of Social Psychology*, 12(1), 20-31.
- Herbig, P., & Genestre, A. (1996). An examination of the cross-cultural differences in service quality: the example of Mexico and the USA. *Journal of Consumer Marketing*, 13(3), 43-53.

- Hernández, B., Jiménez, J., & José Martín, M. (2011). Age, gender and income: do they really moderate online shopping behaviour?. *Online information review*, 35(1), 113-133.
- Hess, J. D., & Bacigalupo, A. C. (2011). Enhancing decisions and decision-making processes through the application of emotional intelligence skills. *Management Decision*, 49(5), 710-721.
- Hess, J., & Story, J. (2005). Trust-based commitment: multidimensional consumer-brand relationships. *Journal of Consumer Marketing*, 22(6), 313-322.
- Ho, T. H., Tang, C. S., & Bell, D. R. (1998). Rational shopping behavior and the option value of variable pricing. *Management Science*, 44(12-part-2), S145-S160.
- Hoch, S. J., & Loewenstein, G. F. (1991). Time-inconsistent preferences and consumer self-control. *Journal of consumer research*, 17(4), 492-507.
- Hodges, B. H., & Geyer, A. L. (2006). A nonconformist account of the Asch experiments: Values, pragmatics, and moral dilemmas. *Personality and Social Psychology Review*, 10(1), 2-19.
- Holt, D. B., Quelch, J. A., & Taylor, E. L. (2004). How global brands compete. *Harvard business review*, 82(9), 68-75.
- Homburg, C., Totzek, D., & Krämer, M. (2014). How price complexity takes its toll: The neglected role of a simplicity bias and fairness in price evaluations. *Journal of Business Research*, 67(6), 1114-1122.
- Hoon Ang, S., Sim Cheng, P., Lim, E. A., & Kuan Tambyah, S. (2001). Spot the difference: consumer responses towards counterfeits. *Journal of consumer Marketing*, 18(3), 219-235.
- Horvitz, E. J. (2013). Reasoning about beliefs and actions under computational resource constraints. *arXiv preprint arXiv:1304.2759*.
- Howells, G. (2005). The potential and limits of consumer empowerment by information. *Journal of Law and Society*, 32(3), 349-370.
- Hoyle, R. H. (1995). *Structural equation modeling: Concepts, issues, and applications*. Sage.

- Huang, Y. F., & Kuo, F. Y. (2012). How impulsivity affects consumer decision-making in e-commerce. *Electronic Commerce Research and Applications*, 11(6), 582-590.
- Huber, F., Herrmann, A., & Wricke, M. (2001). Customer satisfaction as an antecedent of price acceptance: results of an empirical study. *Journal of Product & Brand Management*, 10(3), 160-169.
- Huck, S., Schmid, J., & Wallace, B. (2013). *Price framing* (No. SP II 2013-314). WZB Discussion Paper.
- Husic, M., & Cacic, M. (2009). Luxury consumption factors. *Journal of Fashion Marketing and Management: an international journal*, 13(2), 231-245.
- Hutchinson, J. W., & Alba, J. W. (1991). Ignoring irrelevant information: Situational determinants of consumer learning. *Journal of consumer research*, 18(3), 325-345.
- Hutton, R. J., & Klein, G. (1999). Expert decision making. *Systems Engineering: The Journal of The International Council on Systems Engineering*, 2(1), 32-45.
- Hwang, J., & Kandampully, J. (2012). The role of emotional aspects in younger consumer-brand relationships. *Journal of Product & Brand Management*, 21(2), 98-108.
- Ievers-Landis, C. E., Burant, C. J., & Hazen, R. (2011). The concept of bootstrapping of structural equation models with smaller samples: an illustration using mealtime rituals in diabetes management. *Journal of Developmental & Behavioral Pediatrics*, 32(8), 619-626.
- Inman, J. J., & Winer, R. S. (1998). Where the rubber meets the road: A model of in-store consumer decision making.
- Inman, J. J., McAlister, L. & Hoyer, W. D. (1990). Promotion signal: Proxy for a price cut? *Journal of Consumer Research*, 17(1), 74-81.
- Inman, J.J., S.W. Russell and F. Rosellina, (2009). In Store decision making: The role of category level and shopping trip-level factors. *J. Marketing*, 7(3): 19-29.
- Ivy, J. (2008). A new higher education marketing mix: the 7Ps for MBA marketing. *International Journal of educational management*, 22(4), 288-299.

Iyengar, R., Jedidi, K., & Kohli, R. (2008). A conjoint approach to multipart pricing. *Journal of Marketing Research*, 45(2), 195–210.

Jackson, K. A., & Burke, L. B. (2008). *An assessment of the value of retail ready packaging* (Doctoral dissertation, Massachusetts Institute of Technology).

Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., ... & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, 347(6223), 768-771.

Janiszewski, C. and Lichtenstein, D. R. (1999). A Range Theory Account of Price Perception. *Journal of Consumer Research*, 25(4), 353-68.

Jap, S. D. (2002). Online reverse auctions: Issues, themes, and prospects for the future. *Journal of the Academy of Marketing Science*, 30(4), 506-525.

Jayasingh, S., & Eze, U. C. (2012). Analyzing the intention to use mobile coupon and the moderating effects of price consciousness and gender. *International Journal of E-Business Research (IJEER)*, 8(1), 54-75.

Jensen, B. B., & Grunert, K. G. (2014). Price knowledge during grocery shopping: what we learn and what we forget. *Journal of Retailing*, 90(3), 332-346.

Jensen, T., Kees, J., Burton, S. & Turnipseed, F. L. (2003). Advertised Reference Prices in an Internet Environment: Effects on Consumer Price Perceptions and Channel Search Intentions. *Journal of Interactive Marketing*, 17(2), 20–33.

Jiang, L., Yang, Z., & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*, 24(2), 191-214.

John, D. (1999). Consumer socialization of children: A retrospective look at twenty-five years of research. *Journal of Consumer Research*, 26, 183–213.

Johnson, M.D., Herrmann, A. and Bauer, H.H. (1999), “The effects of price bundling on consumer evaluations of product offerings”, *International Journal of Research in Marketing*, Vol. 16 No. 2, pp. 129-142.

Jones, M. A., Reynolds, K. E., & Arnold, M. J. (2006). Hedonic and utilitarian shopping value: Investigating differential effects on retail outcomes. *Journal of Business Research*, 59(9), 974-981.

Joseph, J., & Sivakumaran, B. (2009). The moderating effect of loyalty on the relationship of sales promotions and brand equity. *ACR Asia-Pacific Advances*.

Josephs, R. A., Markus, H. R., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of personality and social psychology*, 63(3), 391.

Kahn, B. E., (1998). "Dynamic relationships with customers: High-variety strategies". *Journal of the Academy of Marketing Science*. Winter 1998, Volume 26, Issue 1, pp 45-53

Kahneman, D. (2003). A perspective on judgment and choice: mapping bounded rationality. *American psychologist*, 58(9), 697.

Kahneman, D., & Snell, J. (1992). Predicting a changing taste: Do people know what they will like?. *Journal of Behavioral Decision Making*, 5(3), 187-200.

Kahneman, D., & Tversky, A. (1977). Intuitive prediction: Biases and corrective procedures. *DECISIONS AND DESIGNS INC MCLEAN VA*.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the econometric society*, 263-291.

Kahneman, D., & Tversky, A. (1982). The psychology of preferences. *Scientific American*, 246(1), 160-173.

Kahneman, D., & Tversky, A. (1984). Choices, values and frames. *American Psychologist*, 39(4), 341-350.

Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part I* (pp. 99-127).

Kalwani, M. U., & Yim, C. K. (1992). Consumer price and promotion expectations: An experimental study. *Journal of Marketing Research*, 29, 90-100.



Kalyanaram, G. & Winer, R. S. (1995). Empirical Generalizations from Reference Price Research. *Marketing Science*, 14 (3), G161-G169.

Kalyanaram, G., & Little, J. D. (1994). An empirical analysis of latitude of price acceptance in consumer package goods. *Journal of consumer research*, 21(3), 408-418.

Kalyon, B. A. (1971). Stochastic prices in a single-item inventory purchasing model. *Operations Research*, 19(6), 1434-1458.

Kamins, M. A., Folkes, V. S. & Fedorikhin, A. (2009). Promotional bundles and consumers' price judgments: When the best things in life are not free. *Journal of Consumer Research*, 36(4), 660-670.

Kan, C., Lichtenstein, D. R., Grant, S. J., & Janiszewski, C. (2013). Strengthening the influence of advertised reference prices through information priming. *Journal of Consumer Research*, 40(6), 1078-1096.

Karimi, S., Papamichail, K. N., & Holland, C. P. (2015). The effect of prior knowledge and decision-making style on the online purchase decision-making process: A typology of consumer shopping behaviour. *Decision Support Systems*, 77, 137-147.

Karjaluoto, H., Munnukka, J., & Kiuru, K. (2016). Brand love and positive word of mouth: the moderating effects of experience and price. *Journal of Product & Brand Management*, 25(6), 527-537.

Karlsson, T., Kuttainen, C., Pitt, L., & Spyropoulou, S. (2005). Price as a variable in online consumer trade-offs. *Marketing Intelligence & Planning*, 23(4), 350-358.

Karmarkar, U. R., Shiv, B., & Knutson, B. (2014). Cost Conscious? The Neural and Behavioral Impact of Price Primacy on Decision-Making. *Journal of Marketing Research*.

Karrh, J. A., McKee, K. B., & Pardun, C. J. (2003). Practitioners' evolving views on product placement effectiveness. *Journal of advertising research*, 43(2), 138-149.

Kassardjian, E., Gamble, J., Gunson, A., & Jaeger, S.R. (2005). A new approach to elicit consumers' willingness to purchase genetically modified food apples. *British Food Journal*. 107, 541-555.

Keh, H. T., Pang, J., & Peng, S. (2007, June). Understanding and measuring brand love. In *Society for Consumer Psychology Conference Proceedings, Santa Monica* (pp. 84-88).

Kemmelmeier, M., & Oyserman, D. (2001). The ups and downs of thinking about a successful other: Self-construals and the consequences of social comparisons. *European Journal of Social Psychology, 31*(3), 311-320.

Kempf, K. G., Erhun, F., Hertzler, E. F., Rosenberg, T. R., & Peng, C. (2013). Optimizing capital investment decisions at Intel Corporation. *Interfaces, 43*(1), 62-78.

Khan, U., & Dhar, R. (2010). Price-framing effects on the purchase of hedonic and utilitarian bundles. *Journal of Marketing Research, 47*(6), 1090-1099.

Kim, C. K., Han, D., & Park, S. B. (2001). The effect of brand personality and brand identification on brand loyalty: Applying the theory of social identification. *Japanese Psychological Research, 43*(4), 195-206.

Kim, H. S. (2000). Examination of brand personality and brand attitude within the apparel product category. *Journal of Fashion Marketing and Management: An International Journal, 4*(3), 243-252.

Kim, H.M. and Kramer, T. (2006), "The moderating effects of need for cognition and cognitive effort on responses to multi-dimensional prices", *Marketing Letters*, Vol. 17 No. 3, pp. 193-203.

Kim, J., & Sung, Y. (2009). Dimensions of purchase-decision involvement: Affective and cognitive involvement in product and brand. *Journal of Brand Management, 16*(8), 504-519.

Kim, K., Zhang, M., & Li, X. (2008). Effects of temporal and social distance on consumer evaluations. *Journal of Consumer Research, 35*(4), 706-713.

Kinard, B. R., Capella, M. L., & Bonner, G. (2013). Odd pricing effects: an examination using adaptation-level theory. *Journal of Product & Brand Management, 22*(1), 87-94.

King, L. A., & Hicks, J. A. (2009). Positive affect, intuition and referential thinking. *Personality and Individual Differences, 46*(7), 719-724.

- Kitchen, P., Kerr, G., E. Schultz, D., McColl, R., & Pals, H. (2014). The elaboration likelihood model: review, critique and research agenda. *European Journal of Marketing*, 48(11/12), 2033-2050.
- Kivetz, R. and Simonson, I. (2002), "Self-control for the righteous: toward a theory of precommitment to indulgence", *Journal of Consumer Research*, Vol. 29, pp. 199-217.
- Klayman, J. (1995). Varieties of confirmation bias. *Psychology of learning and motivation*, 32, 385-418.
- Kline, P. (2000). *Handbook of Psychological Testing*. London, Routledge.
- Kollat, D. T., & Willett, R. P. (1967). Customer impulse purchasing behavior. *Journal of marketing research*, 21-31.
- Kopalle, P. K. & Lindsey-Mullikin, J. (2003). The impact of external reference price on consumer price expectations. *Journal of Retailing*, 79(4), 225-236.
- Kornell, N., & Bjork, R. A. (2009). A stability bias in human memory: Overestimating remembering and underestimating learning. *Journal of Experimental Psychology: General*, 138(4), 449.
- Koschate-Fischer, N., Cramer, J., & Hoyer, W. D. (2014). Moderating effects of the relationship between private label share and store loyalty. *Journal of Marketing*, 78(2), 69-82.
- Kotler, P, Keller, L (2006) *Marketing Management*, McGraw Hill Inc, New Delhi
- Kotler, P. (2003). *Marketing management*. (11th ed.). New Jersey: Prentice Hall.
- Kotler, P., Keller, K. L., Brady, M., Goodman, M., & Hanser, T. (2016). *Marketing Management, Harlow: Pearson Education*. ISBN 978-0-13-385646-0.
- Kraut, R. E., & Lewis, S. H. (1982). Person perception and self-awareness: Knowledge of influences on one's own judgments. *Journal of Personality and Social Psychology*, 42(3), 448.
- Krishna, A., Briesch, R., Lehmann, D. R., & Yuan, H. (2002). A meta-analysis of the impact of price presentation on perceived savings. *Journal of Retailing*, 78(2), 101-118.

Krishna, A., Currim, I. C. & Shoemaker, R. (1991). Consumer perceptions of promotional activity. *Journal of Marketing*, 55(2), 4–16.

Krishnamurthi, L., & Raj, S. P. (1991). An empirical analysis of the relationship between brand loyalty and consumer price elasticity. *Marketing Science*, 10(2), 172-183.

Krystallis, A., Maglaras, G., & Mamalis, S. (2008). Motivations and cognitive structures of consumers in their purchasing of functional foods. *Food Quality and Preference*, 19(6), 525-538.

Kuenzel, S., & Halliday, S. V. (2010). The chain of effects from reputation and brand personality congruence to brand loyalty: The role of brand identification. *Journal of Targeting, Measurement and Analysis for Marketing*, 18(3-4), 167-176.

Kuenzel, S., & Vaux Halliday, S. (2008). Investigating antecedents and consequences of brand identification. *Journal of Product & Brand Management*, 17(5), 293-304.

Kuvaas, B., & Kaufmann, G. (2004). Impact of mood, framing, and need for cognition on decision makers' recall and confidence. *Journal of Behavioral Decision Making*, 17(1), 59.

Kwon, K-N., Kwon, Y., (2007). Demographics in sales promotion proneness: a socio- cultural approach. *Adv. Consum. Res.* 34, 288–294.

Kwon, K-N., Kwon, Y.J., (2013). Heterogeneity of deal proneness: value-mining, price- mining, and encounters. *J. Retail. Consum. Serv.* 20, 182–188.

Labroo, A. A., & Pocheptsova, A. (2016). Metacognition and consumer judgment: fluency is pleasant but disfluency ignites interest. *Current Opinion in Psychology*, 10, 154-159.

Lageat, T., Czellar, S., & Laurent, G. (2003). Engineering hedonic attributes to generate perceptions of luxury: Consumer perception of an everyday sound. *Marketing Letters*, 14(2), 97-109.

Lagerkvist, C. J. (2013). Consumer preferences for food labelling attributes: Comparing direct ranking and best–worst scaling for measurement of attribute importance, preference intensity and attribute dominance. *Food Quality and Preference*, 29(2), 77-88.

- Lalwani, A. K., & Monroe, K. B. (2005). A reexamination of frequency-depth effects in consumer price judgments. *Journal of Consumer Research*, 32(3), 480-485.
- Lam, S. K., Ahearne, M., Mullins, R., Hayati, B., & Schillewaert, N. (2013). Exploring the dynamics of antecedents to consumer–brand identification with a new brand. *Journal of the Academy of Marketing Science*, 41(2), 234-252.
- Lamb, C. W., Hair, J. F., & McDaniel, C. (2009). *Essentials of marketing*. (6th ed.). Mason: South-Western Cengage Learning.
- Lamb, C. W., Hair, J. F., McDaniel, C., Boshoff, C., Terblanche, N., Elliott, R., & Klopper, H. B. (2010). *Marketing*. (4th ed.). Cape Town: Oxford.
- Lambert, J., Bessière, V., & N'Goala, G. (2012). Does expertise influence the impact of overconfidence on judgment, valuation and investment decision?. *Journal of Economic Psychology*, 33(6), 1115-1128.
- Laroche, M., Kalamas, M., & Renard, X. (2015). The Effects of Price Promotions on Consumers' Price Beliefs. In *Creating and Delivering Value in Marketing* (pp. 135-135). Springer, Cham.
- Laroche, M., Pons, F., Zgolli, B., Cervellon, M., Kim, C., (2003). A model of consumer response to two retail sales promotions techniques. *J. Bus. Res.* 56, 513–522.
- Laroche, M., Pons, F., Zgolli, N., Cervellon, M. C., & Kim, C. (2003). A model of consumer response to two retail sales promotion techniques. *Journal of Business Research*, 56(7), 513-522.
- LeBoeuf, R. A., Shafir, E., & Bayuk, J. B. (2010). The conflicting choices of alternating selves. *Organizational behavior and human decision processes*, 111(1), 48-61.
- Lee, J., & Marlowe, J. (2003). How consumers choose a financial institution: decision-making criteria and heuristics. *International Journal of Bank Marketing*, 21(2), 53-71.
- Lee, M. J., Rabanal, P., & Sandri, D. (2010). US Consumption after the 2008 Crisis. International Monetary Fund.
- Lee, S. A., & Kim, S. H. (2015). ANTECEDENTS AND OUTCOMES OF BRAND-DECISION INVOLVEMENT. Edited by, 87.

Lee, Y. H. & Han, C. Y. (2002). Partitioned pricing in advertising: Effects on brand and retailer attitudes. *Marketing Letters*, 13(1), 27–40.

Lemmerer, A., & Menrad, K. (2015). Customers' use of prices and internal reference prices to evaluate new food products. *British Food Journal*, 117(4), 1411-1424.

Lenth, R. V. (2001). Some practical guidelines for effective sample size determination. *The American Statistician*, 55(3), 187-193.

Leone, R. P., Robinson, L. M., Bragge, J., & Somervuori, O. (2012). A citation and profiling analysis of pricing research from 1980 to 2010. *Journal of Business Research*, 65(7), 1010-1024.

Leppink, J., Paas, F., Van Gog, T., van Der Vleuten, C. P., & Van Merriënboer, J. J. (2014). Effects of pairs of problems and examples on task performance and different types of cognitive load. *Learning and Instruction*, 30, 32-42.

Lewis, M. (2004). The influence of loyalty programs and short-term promotions on customer retention. *Journal of marketing research*, 41(3), 281-292.

Li, Y., Baldassi, M., Johnson, E. J., & Weber, E. U. (2013). Complementary cognitive capabilities, economic decision making, and aging. *Psychology and aging*, 28(3), 595.

Liao, C., Lin, H. N., Luo, M. M., & Chea, S. (2017). Factors influencing online shoppers' repurchase intentions: the roles of satisfaction and regret. *Information & Management*, 54(5), 651-668.

Liberman, N., Trope, Y., & Wakslak, C. (2007). Construal level theory and consumer behavior. *Journal of Consumer Psychology*, 17(2), 113-117.

Lichtenstein, D. R. & Bearden, W. O. (1988). An Investigation of Consumer Evaluations of Reference Price Discount Claims. *Journal of Business Research*, 17(2), 189-200.

Lichtenstein, D. R. & Bearden, W. O. (1989). Contextual Influences on Perceptions of Merchant-Supplied Reference Prices. *Journal of Consumer Research*, 16(1), 55-66.

Lichtenstein, D. R., Burton, S. & Karson, E. J. (1991). The Effect of Semantic Cues on Consumer Perceptions of Reference Price Ads. *Journal of Consumer Research*, 18(3), 380-391.

Lichtenstein, D. R., Burton, S., & Netemeyer, R. G. (1997). Psychological correlates of proneness to deals: a domain-specific analysis. *Advances in consumer research*, 24, 274-280.

Lichtenstein, D. R., Netemeyer, R. G., & Burton, S. (1990). Distinguishing coupon proneness from value consciousness: An acquisition-transaction utility theory perspective. *Journal of Marketing*, 54, 54–67.

Lichtenstein, D. R., Netemeyer, R. G., & Burton, S. (1991). Using a theoretical perspective to examine the psychological construct of coupon proneness. *Advances in consumer research*, 18(1), 501-508.

Lichtenstein, D. R., Netemeyer, R. G., & Burton, S. (1995). Assessing the domain specificity of deal proneness: A field study. *Journal of Consumer Research*, 22, 314–326.

Lichtenstein, D. R., Ridgway, N. M., & Netemeyer, R. G. (1993). Price perceptions and consumer shopping behavior: A field study. *Journal of Marketing Research*, 30, 234–245.

Liefeld, J. & Heslop, L. A. (1985). Reference prices and deception in newspaper advertising. *Journal of Consumer Research*, 11(4), 868–876.

Lin, J. S., & Sung, Y. (2014). Nothing Can Tear Us Apart: The Effect of Brand Identity Fusion in Consumer–Brand Relationships. *Psychology & Marketing*, 31(1), 54-69.

Linthorst, M., Telgen, J., & Schotanus, F. (2008, August). Buying bundles: the effects of bundle attributes on the value of bundling. In *Proceedings of the 3rd International Public Procurement Conference*.

Liu, R. L., Sprott, D. E., Spangenberg, E. R., Czellar, S., & Voss, K. E. (2018). Consumer preference for national vs. private brands: The influence of brand engagement and self-concept threat. *Journal of Retailing and Consumer Services*, 41, 90-100.

Liu, S. S. (1999). When the Irrelevant Becomes Relevant: The Similarity-to-Old Effect on Brand Categorization. *Journal of Current Issues & Research in Advertising*, 21(2), 31-47.

Livingstone, S., & Helsper, E. (2006). Does advertising literacy mediate the effects of advertising on children? A critical examination of two linked research literatures in relation to obesity and food choice. *Journal of Communication*, 56, 560–584.

López-Casasnovas, G., & Puig-Junoy, J. (2000). Review of the literature on reference pricing. *Health policy*, 54(2), 87-123.

Loureiro, S. M. C. (2011). Consumers Love and Willingness to Sacrifice for a Brand. In Conference book Proceedings of ANZMAC conference-Marketing in the Age of Consumerism: Jekyll or Hyde (pp. 28-30).

Lowe, B., & Alpert, F. (2010). Pricing strategy and the formation and evolution of reference price perceptions in new product categories. *Psychology and Marketing*, 26(9), 846–873.

Lowengart, O. (2002). Reference price conceptualisations. *Journal of Marketing Management*, 18(1), 145–171.

Luo, X. (2005). How does shopping with others influence impulsive purchasing?. *Journal of Consumer Psychology*, 15(4), 288-294.

Lurie, N. H., & Wen, N. (2014). Simple Decision Aids and Consumer Decision Making. *Journal of Retailing*, 90(4), 511-523.

Lusardi, A. (2008). Financial literacy: an essential tool for informed consumer choice? (No. w14084). National Bureau of Economic Research.

Lusardi, A., & Mitchell, O. S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of monetary Economics*, 54(1), 205-224.

Lusardi, A., & Mitchell, O. S. (2009). How ordinary consumers make complex economic decisions: Financial literacy and retirement readiness (No. w15350). National Bureau of Economic Research.

Lyonski, S., & Durvasula, S. (2013). Consumer decision making styles in retailing: evolution of mindsets and psychological impacts. *Journal of Consumer Marketing*, 30(1), 75-87.

Mabert, V. A., & Schoenherr, T. (2001). Evolution of online auctions in B2B e-procurement. *PRACTIX*, 5(1), 15-19.



MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological methods*, 1(2), 130.

Madhavaram, S. R., & Laverie, D. A. (2004). Exploring impulse purchasing on the internet. *ACR North American Advances*.

Madhavaram, S., Badrinarayanan, V., & McDonald, R. E. (2005). Integrated marketing communication (IMC) and brand identity as critical components of brand equity strategy: A conceptual framework and research propositions. *Journal of advertising*, 34(4), 69-80.

Maglio, S. J., Trope, Y., & Liberman, N. (2013). Distance from a distance: Psychological distance reduces sensitivity to any further psychological distance. *Journal of Experimental Psychology: General*, 142(3), 644.

Malhotra, N. K. (1982). Information load and consumer decision making. *Journal of consumer research*, 8(4), 419-430.

Mandrik, C. A. (1996). Consumer Heuristics: The Tradeoff Between Processing Effort and Value in Brand Choice. *Advances in Consumer Research*, 23(1).

Mandrik, C., Fern, E., & Bao, Y. (2005). Intergenerational influence: Roles of conformity to peers and communication effectiveness. *Psychology & Marketing*, 22, 813–832.

Manning, K. C. & Sprott, D. E. (2007). Multiple unit price promotions and their effects on quantity purchase intentions. *Journal of Retailing*, 83(4), 411-421.

Mantel, S. P., & Kardes, F. R. (1999). The role of direction of comparison, attribute-based processing, and attitude-based processing in consumer preference. *Journal of Consumer Research*, 25(4), 335-352.

March, J. G. (1978). Bounded rationality, ambiguity, and the engineering of choice. *The Bell Journal of Economics*, 587-608.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological review*, 98(2), 224.

- Martin, L. E., & Potts, G. F. (2009). Impulsivity in decision-making: An event-related potential investigation. *Personality and Individual Differences, 46*(3), 303-308.
- Martin, N., & Morich, K. (2011). Unconscious mental processes in consumer choice: Toward a new model of consumer behavior. *Journal of Brand Management, 18*(7), 483-505.
- Martínez, E., & Montaner, T. (2006). The effect of consumer's psychographic variables upon deal-proneness. *Journal of Retailing and Consumer Services, 13*(3), 157-168.
- Masoom, M. R., Pasha, S. H. A., & Asif-Ur-RAHMAN, S. M. (2015). Factors affecting the consumer purchasing decisions of perishable foods: Exploring the attitudes and the preferences. *Management Dynamics in the Knowledge Economy, 3*(3), 509.
- Mayhew, G. E. & Winer, R. S. (1992). An Empirical Analysis of Memory-based and Stimulus-based Reference Prices Using Scanner Data. *Journal of Consumer Research, 19*(1), 62-70.
- Mazar, N., Shampanier, K., & Ariely, D. (2012). Probabilistic price promotions — When re-tailing and Las Vegas meet. Working paper.
- Mazumdar, T., & Papatla, P. (1995). Loyalty differences in the use of internal and external reference prices. *Marketing Letters, 6*(2), 111-122.
- Mazumdar, T., Raj, S. P., & Sinha, I. (2005). Reference price research: Review and propositions. *Journal of marketing, 69*(4), 84-102.
- McDonald, R. P., & Ho, M. H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological methods, 7*(1), 64.
- McElroy, T., & Seta, J. J. (2003). Framing effects: An analytic–holistic perspective. *Journal of Experimental Social Psychology, 39*(6), 610-617.
- McGraw, A. P., & Tetlock, P. E. (2005). Taboo trade-offs, relational framing, and the acceptability of exchanges. *Journal of Consumer Psychology, 15*(1), 2-15.
- Meenaghan, T. (1995). The role of advertising in brand image development. *Journal of product & brand management, 4*(4), 23-34.

Mehmet, M (2012) Personality effects on experiential consumption' Elsevier Journal, Norway, vol 52, PP 94-98

Mela, C. F., Ataman, M. B., & Van Heerde, H. (2006). The long-term effect of marketing strategy on brand performance. ZIBS Research Reports.

Mela, C. F., Gupta, S., & Lehmann, D. R. (1997). The long-term impact of promotion and advertising on consumer brand choice. *Journal of Marketing research*, 248-261.

Mendez, M., Bendixen, M., Abratt, R., Yurova, Y., & O'Leary, B. (2015). Sales Promotion and Brand Loyalty: Some New Insights. *International Journal of Education and Social Science*, 2, 103-117.

Meyer, D., & Anderson, H. (2000). Preadolescents and apparel purchasing: Conformity to parents and peers in the consumer socialization process. *Journal of Social Behavior and Personality*, 15, 243–257.

Meyer, R., & Johnson, E. J. (1995). Empirical generalizations in the modeling of consumer choice. *Marketing Science*, 14(3\_supplement), G180-G189.

Miller, C. C., & Ireland, R. D. (2005). Intuition in strategic decision making: friend or foe in the fast-paced 21st century?. *The Academy of Management Executive*, 19(1), 19-30.

Mittal, B. (1994). An integrated framework for relating diverse consumer characteristics to supermarket coupon redemption. *Journal of Marketing Research*, 533-544.

Mittal, B., & Royne, M. B. (2010). Consumer as a family: Modes of intergenerational influence on young adults. *Journal of Consumer Behaviour*, 9, 239–257.

Moe, W. W. (2003). Buying, searching, or browsing: Differentiating between online shoppers using in-store navigational clickstream. *Journal of consumer psychology*, 13(1-2), 29-39.

Monroe, K. B. (1971). Measuring price thresholds by psychophysics and latitudes of acceptance. *Journal of marketing research*, 460-464.

Monroe, K. B. (1990). Pricing: Making profitable decisions. McGraw-Hill Companies.

- Monroe, K. B. (2003). *Pricing, Making Profitable Decisions*. New York: McGraw Hill.
- Monroe, K.B. (1973). Buyers' subjective perceptions of price. *Journal of Marketing Research*, 10, 70–80.
- Montgomery, H. (1983). Decision rules and the search for a dominance structure: Towards a process model of decision making. In *Advances in psychology* (Vol. 14, pp. 343-369). North-Holland.
- Moon, Y. J. (2016). Consumer's Shopping Values for e-Satisfaction and e-Loyalty: Moderating Effect of Personality. *International Journal of u-and e-Service, Science and Technology*, 9(2), 331-342.
- Moore, E. S., Wilkie, W. L., & Lutz, R. J. (2002). Passing the torch: Intergenerational influences as a source of brand equity. *Journal of Marketing*, 66, 17–37.
- Morris, P. L., Robinson, R. G., & Samuels, J. (1993). Depression, introversion and mortality following stroke. *Australian & New Zealand Journal of Psychiatry*, 27(3), 443-449.
- Morwitz, V., Greenleaf, E. A. & Johnson, E. J. (1998). Divide and Prosper: Consumers' Reactions to Partitioned Prices. *Journal of Marketing Research*, 35(4), 453-463.
- Morwitz, V.G., Greenleaf, E.A., Shalev, E. and Johnson, E.J. (2009), "The price does not include additional taxes, fees, and surcharges: a review of research on partitioned pricing", 26 February, available at: <http://dx.doi.org/10.2139/ssrn.1350004> (accessed 17 November 2012).
- Mowen, J. C., & Spears, N. (1999). Understanding compulsive buying among college students: A hierarchical approach. *Journal of Consumer Psychology*, 8(4), 407-430.
- Moxley, J. H., Ericsson, K. A., Charness, N., & Krampe, R. T. (2012). The role of intuition and deliberative thinking in experts' superior tactical decision-making. *Cognition*, 124(1), 72-78.
- Muck, P. M., Hell, B., & Gosling, S. D. (2007). The construct validation of a short five-factor model instrument: A self-peer study on the German adaptation of the Ten-Item Personality Inventory (TIPI-G). *European Journal of Psychological Assessment*, 23, 166-175. doi: 10.1027/1015-5759.23.3.166

Mulhern, F. J., & Leone, R. P. (1990). Retail promotional advertising: do the number of deal items and size of deal discounts affect store performance?. *Journal of Business Research*, 21(3), 179-194.

Mullainathan, S., & Shafir, E. (2009). Savings policy and decision-making in low-income households. *Insufficient funds: Savings, assets, credit, and banking among low-income households*, 121, 140-42.

Müller, A., Mitchell, J. E., & de Zwaan, M. (2015). Compulsive buying. *The American journal on addictions*, 24(2), 132-137.

Mullins, J. L (2010) 'Management and Organisational Behaviour' Ninth edition. Prentice Hall Financial Times, New York

Mulyanegara , R (2009). 'The Big Five and Brand Personality: Investigating the Impact of Consumer Personality on Preferences towards Particular Brand Personality. *Journal of Brand Management*, Vol 16, PP 234 –247

Murat, A. (2011) ' Predicting Consumers' Behavioral Intentions with Perceptions of Brand Personality: A Study in Cell Phone Markets *International Journal of Business and Management* Vol. 6, No. 6; June PP 102-113

Murthi, B. P. S., & Rao, R. C. (2012). Price awareness and consumers' use of deals in brand choice. *Journal of Retailing*, 88(1), 34-46.

Myers, H., & Lumbers, M. (2008). Understanding older shoppers: a phenomenological investigation. *Journal of Consumer Marketing*, 25(5), 294-301.

Nagle, T.T., & Hogan, J.E. (2006). *The strategy and tactics of pricing: A guide to growing more profitably* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Nalebuff, B. (2004). Bundling as an Entry Barrier. *The Quarterly Journal of Economics*, 119(1):159–187.

Nam, J., Ekinici, Y., & Whyatt, G. (2011). Brand equity, brand loyalty and consumer satisfaction. *Annals of Tourism Research*, 38(3), 1009-1030.

- Neese, W. T., & Taylor, R. D. (1994). Verbal strategies for indirect comparative advertising. *Journal of advertising Research*.
- Neslin, S. A. (2002). *Sales promotions* (pp. 310-328). London: Sage Publications.
- Nguyen, A., Heeler, R. M. & Buff, C. (2009). Consumer perceptions of bundles. *Journal of Product and Brand Management*, 18(3), 218-225.
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of general psychology*, 2(2), 175.
- Niedrich, R. W., Sharma, S., & Wedell, D. H. (2001). Reference price and price perceptions: A comparison of alternative models. *Journal of Consumer Research*, 28(3), 339-354.
- Niedrich, R. W., Weathers, D., Hill, R. C., & Bell, D. R. (2009). Specifying price judgments with range–frequency theory in models of brand choice. *Journal of marketing research*, 46(5), 693-702.
- Nies, S., & Natter, M. (2010). Are private label users attractive targets for retailer coupons.
- Norris, P., Pacini, R., & Epstein, S. (1998). The rational-experiential inventory, short form. Unpublished inventory. University of Massachusetts at Amherst.
- Northcraft, G. B., & Neale, M. A. (1987). Experts, amateurs, and real estate: An anchoring-and-adjustment perspective on property pricing decisions. *Organizational behavior and human decision processes*, 39(1), 84-97.
- Nottingham University Business School (2005). Research into misleading price comparisons. A report prepared for the Office of Fair Trading, June.
- Nunes, J. C., Park, C. W. (2003). Incommensurate resources: Not just more of the same. *Journal of Marketing Resources*, 40(4), 26–38.
- Nunes, P., Bellin, J., Lee, I., & Schunck, O. (2013). Converting the nonstop customer into a loyal customer. *Strategy & Leadership*, 41(5), 48-53.
- Obermiller, C., & Spangenberg, E. (2000). On the origin and distinctness of skepticism toward advertising. *Marketing Letters*, 11, 311–322.

OFT, 2010. Advertising of Prices. Available at: <http://www.offt.gov.uk/OFTwork/markets-work/advertising-prices/> (accessed 15.03.16).

Oppenheimer, D. M., & Kelso, E. (2015). Information processing as a paradigm for decision making. *Annual review of psychology*, 66, 277-294.

Orr, D., & Guthrie, C. (2005). Anchoring, information, expertise, and negotiation: New insights from meta-analysis. *Ohio St. J. on Disp. Resol.*, 21, 597.

Ostrom, A., & Iacobucci, D. (1995). Consumer trade-offs and the evaluation of services. *The journal of marketing*, 17-28.

Ouellette, J. A., & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological bulletin*, 124(1), 54.

Oyserman, D. (2009). Identity-based motivation and consumer behavior. *Journal of Consumer Psychology*, 19(3), 276-279.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: evaluation of theoretical assumptions and meta-analyses. *Psychological bulletin*, 128(1), 3.

Pacini, R., & Epstein, S. (1999). The relation of rational and experiential information processing styles to personality, basic beliefs, and the ratio-bias phenomenon. *Journal of personality and social psychology*, 76(6), 972.

Palmeira, M. M., & Srivastava, J. (2013). Free offer ≠ cheap product: a selective accessibility account on the valuation of free offers. *Journal of Consumer Research*, 40(4), 644-656.

Pantalon, M. V., Maciejewski, P. K., Desai, R. A., & Potenza, M. N. (2008). Excitement-seeking gambling in a nationally representative sample of recreational gamblers. *Journal of Gambling Studies*, 24(1), 63–78.

Pappu, R., & Quester, P. (2016). Brand innovativeness effects on perceived quality, satisfaction and loyalty. In *Looking forward, looking back: Drawing on the past to shape the future of marketing* (pp. 763-763). Springer, Cham.

Park, C. W., Iyer, E. S., & Smith, D. C. (1989). The effects of situational factors on in-store grocery shopping behavior: The role of store environment and time available for shopping. *Journal of consumer research*, 15(4), 422-433.

Paterson, L., & Iannelli, C. (2005). Social class and educational attainment.

Patwardhan, H., & Balasubramanian, S. K. (2011). Brand romance: a complementary approach to explain emotional attachment toward brands. *Journal of Product & Brand Management*, 20(4), 297-308.

Patwardhan, H., & Balasubramanian, S. K. (2011). Brand romance: a complementary approach to explain emotional attachment toward brands. *Journal of Product & Brand Management*, 20(4), 297-308.

Pauwels, K., Hanssens, D. M., & Siddarth, S. (2002). The long-term effects of price promotions on category incidence, brand choice, and purchase quantity. *Journal of marketing research*, 39(4), 421-439.

Payne, J., Bettman, J. R., & Johnson, E. J. (1991). Consumer decision making. *Handbook of consumer behaviour*, 50-84.

Pechtl, H. (2004). Profiling intrinsic deal proneness for HILO and EDLP price promotion strategies. *Journal of Retailing and Consumer Services*, 11(4), 223-233.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Communication and persuasion* (pp. 1-24). Springer, New York, NY.

Petty, R. E., Briñol, P., Loersch, C., & McCaslin, M. J. (2009). The need for cognition. *Handbook of individual differences in social behavior*, 318-329.

Phillips, B. J., McQuarrie, E. F., & Griffin, W. G. (2014). How Visual Brand Identity Shapes Consumer Response. *Psychology & Marketing*, 31(3), 225-236.

Phua, J., Jin, S. V., & Kim, J. J. (2017). Gratifications of using Facebook, Twitter, Instagram, or Snapchat to follow brands: The moderating effect of social comparison, trust, tie strength, and



network homophily on brand identification, brand engagement, brand commitment, and membership intention. *Telematics and Informatics*, 34(1), 412-424.

Pickton, D. and Broderick, A. (2000) 'Integrated Marketing Communications ', Pearson Education, Harlow, UK.

Pillai, K. G., & Kumar, V. (2012). Differential effects of value consciousness and coupon proneness on consumers' persuasion knowledge of pricing tactics. *Journal of Retailing*, 88(1), 20-33.

Poundstone, W., (2009). *Priceless: The Myth of Fair Value (and How to Take Advantage of it)*. Hill and Wang, New York.

Prelec, D., & Herrnstein, R. J. (1991). 13 Preferences or Principles: Alternative Guidelines for Choice. *Strategy and choice*, 319.

Prendergast, G.P., Poon, D.T.Y., Tsang, A.S.L. and Fan, T.Y. (2008), "Predicting premium proneness", *Journal of Advertising Research*, Vol. 48 No. 2, pp. 287-96.

Pretz, J. E., & Tetz, K. S. (2007). Measuring individual differences in affective, heuristic, and holistic intuition. *Personality and Individual differences*, 43(5), 1247-1257.

Price, L. L., Feick, L. F., & Guskey-Federouch, A. (1988). Couponing behaviors of the market maven: profile of a super couponer. *Advances in consumer research*, 15(1), 354-359.

Pride, W., & Ferrell, O. C. (2010). *Marketing express*. Nelson Education.

Punj, G. N., & Stewart, D. W. (1983). An interaction framework of consumer decision making. *Journal of Consumer Research*, 10(2), 181-196.

Puto, C.P. (1987). The framing of buying decisions. *Journal of Consumer Research*, 14(3), 301–315.

Raghubir, P. (2004). Coupons in context: Discounting prices or decreasing profits? *Journal of Retailing*, 80, 1–12.

- Raghubir, P. (2004). Free gift with purchase: Promoting or discounting the brand? *Journal of Consumer Psychology*, 14(1&2), 181-185.
- Raghubir, P., Inman, J. J., & Grande, H. (2004). The three faces of consumer promotions. *California Management Review*, 46(4), 23-42.
- Raju, J. S. (1992). The effect of price promotions on variability in product category sales. *Marketing Science*, 11(3), 207-220.
- Raju, P. S., Lonial, S. C., & Glynn Mangold, W. (1995). Differential effects of subjective knowledge, objective knowledge, and usage experience on decision making: An exploratory investigation. *Journal of consumer psychology*, 4(2), 153-180.
- Rani, P. (2014). Factors influencing consumer behaviour. *International journal of current research and academic review*, 2(9), 52-61.
- Ranjbarian, M. Kia, N (2010). "The Influence of Personality Traits on Consideration Set Size". *European Journal of Social Sciences – Volume 15, Number 2*.
- Rao, V. G., (2009). "Effect of sales promotions on consumer preferences- the moderating role of price perceptions and deal proneness(A study of FMCG products)". *Management*. Vol. 6 Issue 1,p1-18
- Ratner, R. K., Kahn, B. E., & Kahneman, D. (1999). Choosing less-preferred experiences for the sake of variety. *Journal of consumer research*, 26(1), 1-15.
- Rauyruen, P., & Miller, K. E. (2007). Relationship quality as a predictor of B2B customer loyalty. *Journal of business research*, 60(1), 21-31.
- Rawat, J., & Mann, B. J. S. (2016). Role of consumer personality and involvement in understanding customer experience.
- Reed, A. (2004). Activating the self-importance of consumer selves: Exploring identity salience effects on judgments. *Journal of consumer research*, 31(2), 286-295.
- Reilly, B. A., & Doherty, M. E. (1989). A note on the assessment of self-insight in judgment research. *Organizational Behavior and Human Decision Processes*, 44(1), 123-131.

- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276-295.
- Rerup, C. (2005). Learning from past experience: Footnotes on mindfulness and habitual entrepreneurship. *Scandinavian Journal of Management*, 21(4), 451-472.
- Riquelme, H. (2001). Do consumers know what they want?. *Journal of consumer marketing*, 18(5), 437-448.
- Robbert, T., & Roth, S. (2014). The flip side of drip pricing. *Journal of Product & Brand Management*, 23(6), 413-419.
- Roberts, J., & Nedungadi, P. (1995). Studying consideration in the consumer decision process: Progress and challenges. *International Journal of Research in Marketing*, 12(1), 3-7.
- Robinson, W. T., & Fornell, C. (1985). Sources of market pioneer advantages in consumer goods industries. *Journal of Marketing Research*, 305-317.
- Roedder, D. L. (1981). Age differences in children's responses to television advertising: An information-processing approach. *Journal of consumer research*, 8(2), 144-153.
- Roedder, D. L., Sternthal, B., & Calder, B. J. (1983). Attitude-behavior consistency in children's responses to television advertising. *Journal of Marketing Research*, 337-349.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: an empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rossiter, J. R. (2012). A new C-OAR-SE-based content-valid and predictively valid measure that distinguishes brand love from brand liking. *Marketing Letters*, 23(3), 905-916.
- Russo, J. E., & Leclerc, F. (1994). An eye-fixation analysis of choice processes for consumer nondurables. *Journal of consumer research*, 21(2), 274-290.
- Sadler-Smith, E., & Shefy, E. (2004). The intuitive executive: Understanding and applying 'gut feel' in decision-making. *The Academy of Management Executive*, 18(4), 76-91.

Sadowski, C. J., & Cogburn, H. E. (1997). Need for cognition in the big-five factor structure. *The Journal of Psychology*, 131(3), 307-312.

Sallam, M. A. (2014). The effects of brand image and brand identification on brand love and purchase decision making: the role of WOM. *International Business Research*, 7(10), 187.

Sasmita, J., & Mohd Suki, N. (2015). Young consumers' insights on brand equity: Effects of brand association, brand loyalty, brand awareness, and brand image. *International Journal of Retail & Distribution Management*, 43(3), 276-292.

Savage, M., Devine, F., Cunningham, N., Taylor, M., Li, Y., Hjellbrekke, J., ... & Miles, A. (2013). A new model of social class? Findings from the BBC's Great British Class Survey experiment. *Sociology*, 47(2), 219-250.

Schindler, R. (1989), "The excitement of getting a bargain: some hypotheses concerning the origins and effects of smart-shopper feelings", in Srull, T.S. (Ed.), *Advances in Consumer Research*, Vol. 16, Association for Consumer Research, Provo, UT.

Schindler, R. M. (1998). Consequences of perceiving oneself as responsible for obtaining a discount, evidence for smart- shopper feelings. *Journal of Consumer Psychology*, 7, 371– 392.

Schindler, R. M., Lala, V., & Corcoran, C. (2014). Intergenerational Influence in Consumer Deal Proneness. *Psychology & Marketing*, 31(5), 307-320.

Schindler, R. M., Lala, V., & Corcoran, C. (2014). Intergenerational influence in consumer deal proneness. *Psychology & Marketing*, 31(5), 307-320.

Schlobohm, S., Zulauf, K., & Wagner, R. (2016). A Review of Brand Love: Conceptual Considerations and Their Relevance for Business. In *Let's Get Engaged! Crossing the Threshold of Marketing's Engagement Era* (pp. 343-348). Springer, Cham.

Schneider, L. G., & Currim, I. S. (1991). Consumer purchase behaviors associated with active and passive deal-proneness. *International Journal of Research in Marketing*, 8(3), 205–222.

Schoenherr, T., & Mabert, V. A. (2008). The use of bundling in B2B online reverse auctions. *Journal of Operations Management*, 26(1), 81-95.

Schons, L. M., Rese, M., Wieseke, J., Rasmussen, W., Weber, D., & Strotmann, W. C. (2014). There is nothing permanent except change—analyzing individual price dynamics in “pay-what-you-want” situations. *Marketing Letters*, 25(1), 25-36.

Schwarz, N. (2004). Meta-cognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology*, September.

Seo, M. G., & Barrett, L. F. (2007). Being emotional during decision making—good or bad? An empirical investigation. *Academy of Management Journal*, 50(4), 923-940.

Sethuraman, R., & Cole, C. (1999). Factors influencing the price premiums that consumers pay for national brands over store brands. *Journal of Product & Brand Management*, 8(4), 340-351.

Sexton, R. J., & Zhang, M. (2001). An assessment of the impact of food industry market power on U.S. consumers. *Agribusiness*, 17, 59–79.

Shafir, E. B., Osherson, D. N., & Smith, E. E. (1993). The advantage model: A comparative theory of evaluation and choice under risk. *Organizational Behavior and Human Decision Processes*, 55(3), 325-378.

Shah, A. K., Shafir, E., & Mullainathan, S. (2015). Scarcity Frames Value. *Psychological science*, 0956797614563958.

Shah, R., & Mittal, B. (1997). Toward a theory of intergenerational influence in consumer behavior: An exploratory essay. *Advances in Consumer Research*, 24, 55–60.

Shampan'er, K., & Ariely, D. (2006). How Small is Zero Price. *The True Value of Free Products*.

Shampanier, K., Mazar, N. & Ariely, D. (2007). Zero as a Special Price: The True Value of Free Products. *Marketing Science*, 26(6),742-757.

Shanteau, J. (1988). Psychological characteristics and strategies of expert decision makers. *Acta psychologica*, 68(1), 203-215.

Shanteau, J. (1992). Competence in experts: The role of task characteristics. *Organizational behavior and human decision processes*, 53(2), 252-266.

Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58(7), 935-943.

Shavitt, S., Torelli, C. J., & Wong, J. (2009). Identity-based motivation: Constraints and opportunities in consumer research. *Journal of Consumer Psychology*, 19(3), 261-266.

Sheeran, P. (2002). Intention—behavior relations: A conceptual and empirical review. *European review of social psychology*, 12(1), 1-36.

Shelanski, H.A., Farrell, J., Hanner, D., Metcalf, C.J., Sullivan, M.W. and Wendling, B.W. (2012), “Economics at the FTC: drug and PBM mergers and drip pricing”, *Review of Industrial Organization*, Vol. 41 No. 4, pp. 303-319.

Sheng, S., Bao, Y. and Pan, Y. (2007), “Partitioning or bundling? Perceived fairness of the surcharge make a difference”, *Psychology & Marketing*, Vol. 24 No. 12, pp. 1025-1041.

Sherif, C., Taub, D., & Hovland, C.I. (1958). Assimilation and contrast effects of anchoring stimuli on judgments. *Journal of Experimental Psychology*, 55(2), 150–155.

Sheth, J. N., & Parvatlyar, A. (1995). Relationship marketing in consumer markets: antecedents and consequences. *Journal of the Academy of marketing Science*, 23(4), 255-271.

Sheth, J. N., & Sisodia, R. S. (2002). Marketing productivity: issues and analysis. *Journal of Business research*, 55(5), 349-362.

Shih, H.P. (2012), “Cognitive lock-in effects on consumer purchase intentions in the context of B2C web sites”, *Psychology & Marketing*, Vol. 29 No. 10, pp. 738-751.

Shiloh, S., Salton, E., & Sharabi, D. (2002). Individual differences in rational and intuitive thinking styles as predictors of heuristic responses and framing effects. *Personality and Individual Differences*, 32(3), 415-429.

Shimp, T. A. (2010). Advertising, promotion, and other aspects of integrated marketing communications. (8th ed.). Mason: South- Western Cengage Learning.

- Shimp, T. A., & Madden, T. J. (1988). Consumer-object relations: A conceptual framework based analogously on Sternberg's triangular theory of love. *ACR North American Advances*.
- Shiv, B., & Fedorikhin, A. (1999). Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of consumer Research*, 26(3), 278-292.
- Shocker, A. D., Ben-Akiva, M., Boccara, B., & Nedungadi, P. (1991). Consideration set influences on consumer decision-making and choice: Issues, models, and suggestions. *Marketing letters*, 2(3), 181-197.
- Shukla, P., Banerjee, M., & Singh, J. (2016). Customer commitment to luxury brands: Antecedents and consequences. *Journal of Business Research*, 69(1), 323-331.
- Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*, 41(11/12), 1495-1517.
- Silvera, D. H., & Monroe, K. B. (2012). Price Promotion (In) consistency and Consumers' Brand Evaluations: The Role of Reference Prices.
- Simon, H. A. (1959). Theories of decision-making in economics and behavioral science. *The American economic review*, 49(3), 253-283.
- Simon, H. A. (1978). Rationality as process and as product of thought. *The American economic review*, 68(2), 1-16.
- Simon, H. A. (1991). Bounded rationality and organizational learning. *Organization science*, 2(1), 125-134.
- Sinha, I., & Smith, M.F. (2000). Consumers' perceptions of promotional framing price. *Psychology and Marketing*, 17, 257-275.
- Sinha, T. (1994). Prospect theory and the risk return association: another look. *Journal of Economic Behavior and Organization*, 24(2), 225-231.
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of marketing*, 66(1), 15-37.

Sirgy, M. J., Johar, J. S., & Wood, M. (2015). Determinants of product value-expressiveness: Another look at conspicuousness, differentiation, and common usage. In Proceedings of the 1986 Academy of Marketing Science (AMS) Annual Conference (pp. 35-39). Springer, Cham.

Sladek, R. M., Phillips, P. A., & Bond, M. J. (2006). Implementation science: a role for parallel dual processing models of reasoning?. *Implementation Science*, 1(1), 12.

Slama, M. E., & Tashchian, A. (1985). Selected socioeconomic and demographic characteristics associated with purchasing involvement. *The Journal of Marketing*, 72-82.

Slonim, R., & Garbarino, E. (1999). The effect of price history on demand as mediated by perceived price expensiveness. *Journal of Business Research*, 45(1), 1–14.

Smith, B. A., & Stewart, F. (2009). Learning from the experience of organisation for economic co-operation and development countries: lessons for policy, programs, and evaluations. *Overcoming the Saving slump: How to increase the effectiveness of financial education and saving programs*, 345-367.

Smith, B., & Stewart, F. (2008), “Learning from the Experience of OECD Countries: Lessons for Policy, Programs, and Evaluations,” forthcoming in Annamaria Lusardi (ed.), *Overcoming the Saving Slump: How to Increase the Effectiveness of Financial*

Smith, S. M., & Levin, I. P. (1996). Need for cognition and choice framing effects. *Journal of Behavioral Decision Making*, 9(4), 283-290.

Sniehotta, F. F., Pesseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned behaviour.

So, K. K. F., King, C., Hudson, S., & Meng, F. (2017). The missing link in building customer brand identification: The role of brand attractiveness. *Tourism Management*, 59, 640-651.

So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2013). The influence of customer brand identification on hotel brand evaluation and loyalty development. *International journal of hospitality management*, 34, 31-41.



- Soane, E., Dewberry, C., & Narendran, S. (2010). The role of perceived costs and perceived benefits in the relationship between personality and risk-related choices. *Journal of Risk Research*, 13(3), 303-318.
- Solomon, M., Bamossy, G., Askegaard, S., & Hogg, M. (2006). *Consumer behaviour an European perspective*, Prentice Hall.
- Soman, D., & John, T. (2001). Transaction decoupling: how price bundling affects the decision to consume. *Journal of Marketing Research*, 38, 30–44.
- Sorce, P., Perotti, V., & Widrick, S. (2005). Attitude and age differences in online buying. *International Journal of Retail & Distribution Management*, 33(2), 122-132.
- Spiegel, U., Benzion, U., & Shavit, T. (2011). Free Product as a Complement or Substitute for a Purchased Product—Does it Matter. *Modern Economy*, 2(02), 124.
- Srinivasan, S., & Ganth, B. (2017). Malleability of memory and perception in young adults. *Asian Journal of Research in Social Sciences and Humanities*, 7(7), 436-446.
- Stafford, M. R., Stafford, T. F., & Day, E. (2002). A contingency approach: The effects of spokesperson type and service type on service advertising perceptions. *Journal of Advertising*, 31(2), 17-35.
- Ståhlberg, M., & Maila, V. (2012). *Shopper marketing: How to increase purchase decisions at the point of sale*. Kogan Page Publishers.
- Steenkamp, J. -B. E. M., van Heerde, H. J., & Geyskens, I. (2010). What makes consumer willing to pay a price premium for national brands over private labels? *Journal of*
- Steven, L., McGoldrick, P. J. & Mitchell, V. (2003). Consumer Awareness, Understanding and Usage of Unit Pricing. *British Journal of Management*, 14(2), 173-187 .
- Stremersch, S. and Tellis, G. J. (2002). Strategic bundling of products and prices: A new synthesis for marketing. *The Journal of Marketing*, 66:55–72.

- Strizhakova, Y., Coulter, R. A., & Price, L. L. (2011). Branding in a global marketplace: The mediating effects of quality and self-identity brand signals. *International Journal of Research in Marketing*, 28(4), 342-351.
- Sudhakar, J. C., & Venkatapathy, R. (2005). Automobile Purchase-peer Influence in Decision Making. *Indian Journal of Marketing*, 35(6).
- Sun, T., & Wu, G. (2004). Consumption patterns of Chinese urban and rural consumers. *Journal of Consumer Marketing*, 21(4), 245-253.
- Suri, R., Monroe, K. B., & Koc, U. (2013). Math anxiety and its effects on consumers' preference for price promotion formats. *Journal of the Academy of Marketing Science*, 41(3), 271-282.
- Sutin, A. R., Costa Jr, P. T., Miech, R., & Eaton, W. W. (2009). Personality and career success: Concurrent and longitudinal relations. *European Journal of Personality: Published for the European Association of Personality Psychology*, 23(2), 71-84.
- Sutton, S. (1998). Predicting and explaining intentions and behavior: How well are we doing?. *Journal of applied social psychology*, 28(15), 1317-1338.
- Swaminathan, V., Stilley, K., & Ahluwalia, R. (2009). The role of brand personality and consumer attachment style in strengthening brand relationships. *ACR North American Advances*.
- Tan, S. & Chua, S. W. (2004). "While stocks last!" Impact of framing on consumers' perception of sales promotions. *Journal of Consumer Marketing*, 21(5), 343-455.
- Tanford, S., Raab, C., & Kim, Y. S. (2012). Determinants of customer loyalty and purchasing behavior for full-service and limited-service hotels. *International Journal of Hospitality Management*, 31(2), 319-328.
- Teare, R. (1994). Consumer decision making. *Marketing in hospitality and tourism: a consumer focus.*, 3-96.
- Thaler, R. (1985), "Mental accounting and consumer choice", *Marketing Science*, Vol. 4 No. 3, pp. 199-124.

- Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral decision making*, 12(3), 183-206.
- Thaler, R. H. (2008). Mental accounting and consumer choice. *Marketing Science*, 27(1), 15-25.
- Thomas, M. & Menon, G. (2005). Effects of Repetition on Price Comparison Process. *Advances in Consumer Research*, 32(1), 72-74.
- Thompson, D. V., Hamilton, R. W., & Rust, R. T. (2005). Feature fatigue: When product capabilities become too much of a good thing. *Journal of marketing research*, 42(4), 431-442.
- Townsend, C., & Kahn, B. E. (2013). The “visual preference heuristic”: The influence of visual versus verbal depiction on assortment processing, perceived variety, and choice overload. *Journal of Consumer Research*, 40(5), 993-1015.
- Townsend, C., & Kahn, B. E. (2013). The “visual preference heuristic”: The influence of visual versus verbal depiction on assortment processing, perceived variety, and choice overload. *Journal of Consumer Research*, 40(5), 993-1015.
- Trifts, V. & Häubl, G. (2003). Information availability and consumer preference: Can online retailers benefit from providing access to competitor price information? *Journal of Consumer Psychology*, 13(1&2), 149-159.
- Trinh, G., Dunn, S. & Bogomolova, S. (2012). Prevalence and Nature of Price Promotions in UK Supermarkets. Working Paper.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological review*, 117(2), 440.
- Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of consumer psychology*, 17(2), 83-95.
- Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of consumer psychology: the official journal of the Society for Consumer Psychology*, 17(2), 83.

- Turley, L. W., & Cabaniss, R. F. (1995). Price knowledge for services: An empirical investigation. *Journal of Professional Services Marketing*, 12(1), 39-52.
- Tuškej, U., Golob, U., & Podnar, K. (2013). The role of consumer–brand identification in building brand relationships. *Journal of business research*, 66(1), 53-59.
- Tversky, A. & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
- Tversky, A., & Kahneman, D. (1975). Judgment under uncertainty: Heuristics and biases. In *Utility, probability, and human decision making* (pp. 141-162). Springer Netherlands.
- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *The quarterly journal of economics*, 106(4), 1039-1061.
- Tversky, A., & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision.
- Tversky, A., Sattath, S., & Slovic, P. (1988). Contingent weighting in judgment and choice. *Psychological review*, 95(3), 371.
- Underwood, R. L., & Foley, J. F. (2015). Communicating Industrial Brand Value in the Global Marketplace: An Integrated Marketing Communications Perspective–Abstract. In *Proceedings of the 2000 Academy of Marketing Science (AMS) Annual Conference* (pp. 269-269). Springer, Cham.
- Urbany, J.E., Bearden, W., Kaicker, A., & Smith-de-Borrero, M. (1997). Transaction utility effects when quality is uncertain. *Journal of the Academy of Marketing Science*, 25(1), 45–55.
- Urbany, J.E., Bearden, W.O., & Weilbaker, D.C. (1988). The effect of plausible and exaggerated reference prices on consumer perceptions and price search. *Journal of Consumer Research*, 15, 95–111.
- Vaidyanathan, R., Aggarwal, P., Stem, D.E., Muehling, D.D. and Umesh, U.N. (2000), “Deal evaluation and purchase intention: the impact of aspirational and market-based internal reference prices”, *Journal of Product & Brand Management*, Vol. 9 No. 3, pp. 179-92.
- Valette-Florence, P., Guizani, H., & Merunka, D. (2011). The impact of brand personality and sales promotions on brand equity. *Journal of Business Research*, 64(1), 24-28.

- Van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: contributions from technology and trust perspectives. *European journal of information systems*, 12(1), 41-48.
- van Heerde, H., & Neslin, S. (2008). Sales promotion models. In B. Wierenga (Ed.), *Handbook of Marketing Decision Models*, New York, NY: Springer.
- Van Osselaer, S. M., & Alba, J. W. (2000). Consumer learning and brand equity. *Journal of consumer research*, 27(1), 1-16.
- Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2), 449-472.
- Vanhuele, M., & Drèze, X. (2002). Measuring the Price Knowledge Shoppers Bring to the Store. *Journal of Marketing*, 66(4), 72-85.
- Veloutsou, C. (2015). Brand evaluation, satisfaction and trust as predictors of brand loyalty: the mediator-moderator effect of brand relationships. *Journal of Consumer Marketing*, 32(6), 405-421.
- Verbeke, W., & Vackier, I. (2004). Profile and effects of consumer involvement in fresh meat. *Meat science*, 67(1), 159-168.
- Verbeke, W., & Vackier, I. (2004). Profile and effects of consumer involvement in fresh meat. *Meat science*, 67(1), 159-168.
- Verplanken, B. & Sato, A. (2011). The Psychology of Impulse Buying: An Integrative Self-Regulation Approach. *Journal of Consumer Policy*, 34, 197-210.
- Vigneron, F., & Johnson, L. W. (2017). Measuring perceptions of brand luxury. In *Advances in Luxury Brand Management*(pp. 199-234). Palgrave Macmillan, Cham.
- Vohs, K. D., Baumeister, R. F., Schmeichel, B. J., Twenge, J. M., Nelson, N. M., & Tice, D. M. (2014). Making choices impairs subsequent self-control: a limited-resource account of decision making, self-regulation, and active initiative.

Völkner, F., Rühle, A. and Spann, M. (2012), "To divide or not to divide? The impact of partitioned pricing on the informational and sacrifice effects of price", *Marketing Letters*, Vol. 23 No. 3, pp. 719-730.

Von Gaudecker, H. M. (2011). How does household portfolio diversification vary with financial sophistication and advice?.

Voss, K. E., Spangenberg, E. R., & Grohmann, B. (2003). Measuring the hedonic and utilitarian dimensions of consumer attitude. *Journal of marketing research*, 40(3), 310-320.

Wallace, D. W., Giese, J. L., & Johnson, J. L. (2004). Customer retailer loyalty in the context of multiple channel strategies. *Journal of retailing*, 80(4), 249-263.

Wang, J. J., Zhao, X., & Li, J. J. (2013). Group buying: A strategic form of consumer collective. *Journal of Retailing*, 89(3), 338-351.

Wansink, B., & Seed, S. (2001). Making brand loyalty programmes succeed. *Journal of Brand Management*, 8(3), 211-222.

Wansink, B., Kent, R. J. & Hoch, S. J. (1998). An Anchoring and Adjustment Model of Purchase Quantity Decisions. *Journal of Marketing Research*, 35(1), 71–81.

Ward, S. (1974). Consumer socialization. *Journal of Consumer Research*, 1, 1–14.

Watson, S. (2009). Credit card misuse, money attitudes, and compulsive buying behaviors: A comparison of internal and external locus of control (LOC) consumers.?College Student Journal,?43(2), 268.

Weber, J. M., & Capitant de Villebonne, J. (2002). Differences in purchase behavior between France and the USA: the cosmetic industry. *Journal of Fashion Marketing and Management: An International Journal*, 6(4), 396-407.

Weber, M., & Borchering, K. (1993). Behavioral influences on weight judgments in multiattribute decision making. *European Journal of Operational Research*, 67(1), 1-12.

Webley, P., & Nyhus, E. K. (2013). Economic socialization, saving and assets in European young adults. *Economics of Education Review*, 33, 19-30.

Webster Jr, F. E. (1965). The "deal-prone" consumer. *Journal of Marketing Research*, 186-189.

Wedell, K. (1995). Making inclusive education ordinary. *British Journal of Special Education*, 22(3), 100-104.

Wells, G. L., & Olson, E. A. (2003). Eyewitness testimony. *Annual Review of Psychology*, 54(1), 277-295.

Wertenbroch, K., Dhar, R., & Khan, U. (2005). A behavioral decision theory perspective on hedonic and utilitarian choice. In *Inside consumption* (pp. 166-187). Routledge.

Whang, Y. O., Allen, J., Sahoury, N., & Zhang, H. (2004). Falling in love with a product: The structure of a romantic consumer-product relationship. *ACR North American Advances*.

Williams, T. (2007). Empowerment of whom and for what? Financial literacy education and the new regulation of consumer financial services. *Law & Policy*, 29(2), 226-256.

Wilson, T. D., & Schooler, J. W. (1991). Thinking too much: introspection can reduce the quality of preferences and decisions. *Journal of personality and social psychology*, 60(2), 181.

Winer, R. S. (1986). A Reference Price Model of Brand Choice for Frequently Purchased Products. *Journal of Consumer Research*, 13(2), 250-256.

Winterich, K. P., & Barone, M. J. (2011). Warm glow or cold, hard cash? Social identity effects on consumer choice for donation versus discount promotions. *Journal of Marketing Research*, 48(5), 855-868.

Wolk, A. & Spann, M. (2008). The effects of reference prices on bidding behaviour. *Journal of Interactive Marketing*, 22(4), 2-18.

Wood, S. A., & Hampson, S. E. (2005). Measuring the Big Five with single items using a bipolar response scale. *European Journal of Personality*, 19, 373-390.

Wooten, D. (2006). From labeling possessions to possessing labels: Ridicule and socialization among adolescents. *Journal of Consumer Research*, 33, 188-198.

Wright, P. (1975). Consumer choice strategies: Simplifying vs. optimizing. *Journal of Marketing Research*, 12, 60–67.

Wu, W. Y., Lu, H. Y., Wu, Y. Y., & Fu, C. S. (2012). The effects of product scarcity and consumers' need for uniqueness on purchase intention. *International journal of consumer studies*, 36(3), 263-274.

Xia, L. & Monroe, K. B. (2004). Price partitioning on the internet. *Journal of Interactive Marketing*, 18(4), 63-73.

Xia, L., & Monroe, K. B. (2009). The influence of pre-purchase goals on consumers' perceptions of price promotions. *International Journal of Retail & Distribution Management*, 37(8), 680-694.

Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of marketing*, 68(4), 1-15.

Xiao, J. Y. (2015). Heuristics, Biases, and Consumer Litigation Funding at the Bargaining Table. *Vanderbilt Law Review*, 68(1).

Yadav, M. S. (1994). How buyers evaluate product bundles: A model of anchoring and adjustment. *Journal of Consumer Research*, 342-353.

Yadav, M.S. and Monroe, K.B. (1993), “How buyers perceive savings in a bundle price: an examination of a bundle’s transaction value”, *Journal of Marketing Research*, Vol. 30 No. 3, pp. 350-358.

Yang, Z., Su, C., & Fam, K. S. (2012). Dealing with institutional distances in international marketing channels: Governance strategies that engender legitimacy and efficiency. *Journal of Marketing*, 76(3), 41-55.

Yap, M., & Konrad, A. M. (2009). Gender and racial differentials in promotions: Is there a sticky floor, a mid-level bottleneck, or a glass ceiling?. *Relations Industrielles/Industrial Relations*, 64(4), 593-619.

Yeh, C. H., Wang, Y. S., & Yieh, K. (2016). Predicting smartphone brand loyalty: Consumer value and consumer-brand identification perspectives. *International Journal of Information Management*, 36(3), 245-257.



Yeshin, T. (2006). Sales promotion. London: Thomson Learning.

Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: a review and update of the literature. *Renewable Agriculture and Food Systems*, 20(04), 193-205.

Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American psychologist*, 35(2), 151.

Zarantonello, L., & Schmitt, B. H. (2013). The impact of event marketing on brand equity: The mediating roles of brand experience and brand attitude. *International Journal of Advertising*, 32(2), 255-280.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.

Zhang, X., Prybutok, V. R., & Strutton, D. (2007). Modeling influences on impulse purchasing behaviors during online marketing transactions. *Journal of Marketing Theory and Practice*, 15(1), 79-89.

Zheng, X., Cheung, C. M., Lee, M. K., & Liang, L. (2015). Building brand loyalty through user engagement in online brand communities in social networking sites. *Information Technology & People*, 28(1), 90-106.

Zhou, Z., & Nakamoto, K. (2001). Price perceptions: a cross-national study between American and Chinese young consumers. *Advances in Consumer Research*, 28, 161-168.

Zhuang, W., & Alford, B. (2015). The mediation effects of sticker shock. *Journal of Product & Brand Management*, 24(4), 412-419.



# APPENDIX

## Appendix 1.

Summary of the top nine supermarket retailers in the UK

<b>UK Retailer</b>	<b>Av. Market Share (15-18)</b>
Tesco	27%
Sainsbury's	16%
Asda	10.5%
Morrisons	7%
Aldi	6.5%
Co-Op	5.5%
Waitrose	5%
Lidl	5%
Iceland	2%

## Appendix 2.

### Framing method of each of the 'big four' promotions

**Control** items were consistently presented as 'wow, great value', with no description of value or price being attributed.

**Value-Based** promotions were framed from an economical, retailer-priced, perspective as 'wow great value, RRP £X for just £X'. Inflation or deflation of the RRP relative to market average was a component of the experimental conditions.

**Bundling** was framed as 'Get our super-value bundle of X for just £X'. All constituent items of a bundle were presented together, i.e. in the same visual, but as separate items. Font size for the price and constituent items of the bundle was three times that of the single unit prices. Single unit prices of each bundled item were given separately to the promotional price. Unit prices presented with the promotional price referred to measurement prices. For instance, a 1l bottle of Pepsi costing £1 was, when framed with the bundle, priced at 10p per 100ml. While this is not usual in retailer settings, the lack of stimuli, prices and promotions typically found on the product shelf heightens awareness for the bundle's components. Thus, the decision to separate overall single unit prices but retain measurement prices was intended to mimic real life. Sub-optimal bundles were priced marginally higher than the total of the items when sold separately.

**Drip priced** promotions were made up of three elements, the base price, tax and a card surcharge. The RRP was presented first as the base price was presented first, minus 13% vat. This was described as 'Amazing low price from £X'. After the intent to buy, the participant was presented with the checkout scenario at which the 14% tax was added. Purchase intentions were again recorded, after which a consumer chose to pay with card or cash. Card payments received loyalty points, the value of which wasn't disclosed. Card payments also attracted a 0.5% mandatory charge. Intentions were taken before subjects were asked whether or not they wished to switch to cash. A final purchase intention measure was then recorded. Sub-optimal drip pricing involved the increase of the final price in comparison to the RRP.

'**BOGDIF**' instead of 'BOGOF' would be used to represent the promotions offering 'free' aspects of the promotion. If presented simply as 'Buy X and get X free' the manipulation of the price should be less detectable. All 'free items' were of nominal value compared to that of the focus item, which was in all cases complementary to the product. In cases of sub-optimal BOGDIF promotions the price accounted for over 50% of the free item, so while this was still of value, it was not free as the promotion suggested.

### Appendix 3.

Summary of interviewee characteristics and one full example transcript

Interviewee Assignment	Position	Field	Years' Experience	Country
1	Professor	Academia	23	USA
2	Director	Marketing	21	UK
3	Director	Marketing	25	UK
4	Professor	Academia	19	USA
5	Insights Director	Business Strategy	19	UK
6	Team Lead	Marketing	24	UK
7	Professor	Academia	12	UK
8	Partner	Business Strategy	19	UK
9	Professor	Academia	24	UK
10	Manager	Business Strategy	23	UK
11	Director	Business Strategy	22	UK
12	Professor	Academia	25	DE
13	Director	Marketing	23	USA
14	Managing Partner	Business Strategy	25	USA
15	Professor	Academia	24	USA
16	Marketing Director	Marketing	17	UK
17	Director	Business Strategy	21	UK
18	Partner	Business Strategy	20	UK
19	Marketing Director	Marketing	25	UK
20	Insights Director	Marketing	20	UK

#### Example Interview Transcript with Interviewee 10

**Interviewer (ST):** Steen Tjarks

**Interviewee (MB):** Managing Director Pricing Strategy Simon Kucher & Partners

**Interview Setting:** Interview conducted in SKP's London head office. The interview was conducted at 10:30 AM on Wednesday 1<sup>st</sup> March 2017.

**Affiliation & Suitability of Interviewee:** As the head of pricing and having worked together before, MB's knowledge of developing and using promotions to drive value in applied B2B and B2C settings

is second to none. With over 25 years' experience in helping to develop pricing approaches and models to increase profitability for businesses he and his team is at the forefront of applied knowledge surrounding how and why promotions are so effective.

**(Start of Interview)**

**ST:** MB, thanks again for taking the time to speak to me today. I realize your time is short so let's get started. As I said in my email the point of today is to have a chat about pricing, ideally promotions, why you think they are so effective and what psychological factors potentially drive promotional effectiveness. With that in mind, I am going to ask four specific questions. If there is an area that needs more elaboration I will simply say 'could you elaborate on that some more, please'. I will try not to say anything more so that I do not direct this conversation in one way or another and am happy to repeat the question as necessary. Cool, are you ready?

**MB:** Sure, yes let's start!

**ST:** Great, so the first question is: What is your role in your organisation and what is your focus?

**MB:** Ok, as you know my current position is the managing director here in SKP's London office. I am also a senior partner within the organisation and work closely with the other MDs in our international offices. My role is split equally between managing and direct projects and developing business. On the project side I oversee and help advise the junior partners and the scenario consultants on the pricing initiatives they are proposing to our B2B and B2C clients. This involves, helping them leverage the data from the clients whether behavioural, financial or both sometimes and develop a pricing approach from this. Often the goal of our clients is one and the same - to increase sales. Over the last 25 years working here I have learnt various techniques to help clients do this via pricing specific to their sector. Because each sector is very different, with different leverage points it is very important to get the right pricing approach, especially in B2B markets. Given my experience the team often come to me to help them with their projects. This actually works out well for me as it aligns with the second part of my job – the business development side of things. As an MD I am also responsible for developing relationships with new and existing clients. Since the responsibility of projects is with me anyway it is always useful to have some input into the final pricing solutions offered to our clients so that I know what we are offering meets the expectations I and my two other partners set when we develop new relationships. Is that what you were looking for?

**ST:** Yes, thank you. That level of comprehensiveness is great. Moving on then, what work do you do in relation to promotions?

**MB:** So, promotions are definitely a vital tool that we use in B2C settings to help our clients shift volume and increase sales. While it is not a tactic that we use every day it is one that I myself used to develop for national retailers back in 05/06. When we recommend a promotional initiative to our clients we firstly advise them of both the benefits and pitfalls of the methods and then go about trying to assess which products are best suited to the various types of promotions. We do this by looking at SKU volumes in the client's warehouse, the competition on the market and then then margin. Products with a low margin to the retailer do not offer much in the way of profit so they are the ones that are best to be promoted. Likewise, if an item is readily stocked from the national brands e.g., P&G then there is likely to be regional surpluses that are perfect opportunities for promotions. In terms of our approach, we usually look at the promotional methods the client currently uses and then develop an annual promotional plan based on the sales data from the current methods they use.

**ST:** Interesting, can you elaborate on that last bit about the methods used please.

**MB:** In terms of the promotional methods they have used and then we recommend?

**ST:** Yes, exactly

**MB:** Sure, so the methods we commonly analysed are the typical promotions that you see on shelf, you know the standard buy one get one free, reference pricing or bundles. For online customers we also look at scarcity tactics and drip pricing. Other popular pricing methods for our clients are bait advertising and versioning. Basically, having different versions of a product or group on display can increase preferences for the higher or lower tiers; it's this idea of the middle option, and yes I will admit that it shifts decisions in their favour. Once we have assessed their approach we consider what others are doing in the market and how they leverage their promotions for a competitive advantage. Since these types of promotions work so well at increasing sales we then look at the client's target consumer and work out how to best leverage their purchasing behaviour to devise a practice based on these standard approaches. For example, we recently trailed a new form of bait pricing that was based on cookies and browsing history. As the consumer when through the drip process the consumer was shown the savings our client offered relative to their competitors, the competition part derived from the cookie and history data. It was a really interesting idea as it allowed the consumer to compare each dripped price without leaving the site and showed the potential savings. This increased purchase intent even further. 'We often also design promotions so that the consumer directly focuses on the advertised savings rather than the actual value per unit. We know that consumers rarely spend more than a few seconds deciding on a product, so we make it easy, focus on the savings. Furthermore, although many of the promotions we design are advertised over half are store specific. These are

purchased by consumer's who are essentially browsing and offer us a great opportunity to shift volume at a more premium price point'.

**ST:** Great, thanks for sharing. Moving on, what factors do you think influence the way consumers make efficient decisions when buying in promotional contexts and why?

**MB:** Hmmm, this is an interesting one. Well I can honestly say that despite not being as knowledgeable on the topic as you, that if the last 25 years has taught me one thing is that a consumer's behaviour whether a business or person is vital in determining how promotions are engaged with. Unfortunately, when we gather, look at or analyse the behaviour of our clients target customers its always at a typological level and superficial level. For example, we often analyse data around customer demography and personality. We frequently see that gender, age, education and income to be key determinants of purchasing both in normal purchase contexts and promotional. Also, those who have large social circles, are more socially inclined and have families are more likely to be the ones buying promotions. I mean I guess this is a sort of extraversion, although we don't tend to use terms like that with our clients. Another area that we look at a lot is loyalty behaviours and their impact on pricing and promotions. In particular, we often look at loyalty-based sales from say, points or loyalty cards to understand which prices or promotions are accepted. We also sometimes get to see attitudinal data from loyal vs indifferent consumers to our clients. It's very interesting to see that the loyal consumers expect promotions or offers more than others. Because of this we often help our clients devise loyalty and promotions schemes in unison although this does raise expectations of the loyal consumer in the long term. To be hones though, I know that there are many behavioural elements that I am missing but our practices revolve around the analysis of sales data, and so we primarily base our practices on demographics and econometric models. I would actually love to see your end findings to understand more around this particular topic.

**ST:** Great thank you, Ok final question. Of the factors mentioned, which do you think is the most important and how do these factors interlink? Or do they not?

**MB:** I would say that a decision and the outcome is based on who we are and if we trust the retailer, consider drip pricing, I mean wow, Ryanair's 99p flights! Everyone knows that a flight won't really cost 99p but we trust advertising and marketing cues, so we go through the motions and get to the checkout. After all of this we get hit with the mother of all prices and bag charges. It takes a certain type of lazy shopper to just say screw it I can't be bothered to now go and compare prices. Also, I know I touched on consumer typologies and brand loyalty. Our work and also that which I have read clearly indicates that the typology of a consumer helps to determine brand loyalty which as I said clearly has an impact to how promotions are engaged with and decisions made. There is also a clear link between market factors such as the competitive prices, and price wars that help certain types or



'profiles' of consumers to purchase in rather specific ways. For example, money strapped consumers will inevitable turn more and more towards promotions as disposable incomes decrease and price wars rage. I hope that helps, what's the last area to touch on?

**ST:** Thanks again for your time, OK the final question is based online. Please follow this link here and answer at your own pace.

**(End of Interview Phase)**

## Appendix 4.

### Adopted Need for Cognition (NFC) and Faith in Intuition (FII) Scale per the 10-item inventory (Norris, Pacini & Epstein, 1998)

The scales asked participants to describe the extent to which they agree with each statement using a 9-point scale with the following values:

- 9 = very strong agreement
- 8 = strong agreement
- 7 = moderate agreement
- 6 = slight agreement
- 5 = neither agreement nor disagreement
- 4 = slight disagreement
- 3 = moderate disagreement
- 2 = strong disagreement
- 1 = very strong disagreement

Five item NFC Scale adopted from Norris, Pacini & Epstein (1998)

Q. Number	Question
1.	I would prefer complex to simple problems.
2.	Thinking is not my idea of fun.*
3.	I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*
4.	I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*
5.	I find satisfaction in deliberating hard and for long hours.

\*reverse scored

Five item FII Scale adopted from Norris, Pacini & Epstein (1998)

Q. Number	Question
1.	I often go by my instincts when deciding on a course of action.
2.	I hardly ever go wrong when I listen to my deepest gut feelings to find an answer.
3.	I suspect my hunches are inaccurate as often as they are accurate.*
4.	I don't think it is a good idea to rely on one's intuition for important decisions. *
5.	I tend to use my heart as a guide for my actions.

## Appendix 5.

Factor Analysis Communalities of NFC and FII items, using principal axis factoring and direct-oblimin rotations

Question	Factor Communalities	
	NFC	FII
I often go by my instincts when deciding on a course of action.	0.587	~
I find satisfaction in deliberating hard and for long hours.	0.455	~
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*	0.398	~
I suspect my hunches are inaccurate as often as they are accurate.*	0.458	~
I tend to use my heart as a guide for my actions.	0.497	~
Thinking is not my idea of fun.*	~	- 0.544
I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*	~	- 0.498
I hardly ever go wrong when I listen to my deepest gut feelings to find an answer.	~	- 0.476
I would prefer complex to simple problems.	~	- 0.488
I don't think it is a good idea to rely on one's intuition for important decisions. *	~	- 4.260
Factor 1 - NFC (1.298) = 44.3%		
Factor 2 - FII (1.569) = 41.27%		

## Appendix 6.

Four item Purchase Experience Scale, as is presented by Wallace, Giese and Johnson (2004)

---

Disagree Strongly	Disagree Moderately	Disagree A Little	Neither Agree or Disagree	Agree A Little	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

---

Compared to the general population, how would you rate your experience at researching and purchasing products of this sort?

1. researching
2. purchasing

Compared to others who buy this type of product, how would you rate your experience at researching and purchasing products of this sort?

3. researching
  4. purchasing
-

## Appendix 7.

Ten Item Personality Index (TIPI), as is presented by Gosling *et al.* (2003)

Disagree Strongly	Disagree Moderately	Disagree A Little	Neither Agree or Disagree	Agree A Little	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7
<b>I see myself as:</b>						
1.	__	Extraverted, enthusiastic				
2.	__	Critical, quarrelsome				
3.	__	Dependable, self-disciplined				
4.	__	Anxious, easily upset				
5.	__	Open to new experiences, complex				
6.	__	Reserved, quite				
7.	__	Sympathetic, warm				
8.	__	Disorganized, careless				
9.	__	Calm, emotionally stable				
10.	__	Conventional, uncreative				

### Appendix 8.

Summary of MANCOVA effects between economic utilitarian conditions,  
summarized by pillai's trace values

	<i>Maximum Utility</i>			<i>Normal Utility</i>			<i>Depreciative Utility</i>		
	<b>F</b>	<b>Sig.</b>	<b>Partial Eta<sup>2</sup></b>	<b>F</b>	<b>Sig.</b>	<b>Partial Eta<sup>2</sup></b>	<b>F</b>	<b>Sig.</b>	<b>Partial Eta<sup>2</sup></b>
Intercept	1.14	.35	.102	0.219	.95	.020	1.946	.10	.166
Age	2.437	<b>.05</b>	.196	0.947	.46	.081	0.751	.59	.071
Education	0.516	.76	.049	0.426	.83	.038	1.389	.25	.124
Gender	0.625	.68	.059	3.488	<b>.01</b>	.244	0.416	.84	.041
Income	0.829	.54	.077	0.711	.62	.062	1.329	.27	.119
Social Class	16.374	<b>.00</b>	.621	1.484	.21	.121	1.139	.35	.104
Extraversion	0.665	.65	.062	1.533	.20	.124	0.813	.55	.077
Agreeableness	0.737	.60	.069	0.698	.63	.061	1.357	.26	.122
Neuroticism	4.013	<b>.00</b>	.286	1.329	.27	.110	2	.10	.170
Conscientiousness	0.896	.49	.082	1.971	.10	.154	1.095	.38	.100
Openness to Experience	1.035	.41	.094	1.249	.30	.104	2.166	.07	.181
NFC	3.253	<b>.01</b>	.245	1.784	.13	.142	2.674	<b>.03</b>	.214
FII	5.086	<b>.00</b>	.337	1.511	.20	.123	1.671	.16	.146
Financial Literacy (FL)	1.039	.41	.094	1.592	.18	.128	0.792	.56	.075
Consumer Exp. (CE)	3.922	<b>.00</b>	.282	0.517	.76	.046	2.568	<b>.04</b>	.208
CE*FII	3.719	<b>.01</b>	.271	1.04	.40	.088	1.735	.14	.150
FL*CE	1.436	.23	.126	2.169	.07	.167	1.154	.35	.105
NFC*FL	0.505	.77	.048	1.369	.25	.113	1.259	.30	.114

## Appendix 9.

Example promotional flyer that consisted of a mixture of news items and promotional callouts

Always Lowest Prices



# MARKET KING

Amazing Deals on Products!

[www.themarketking.com](http://www.themarketking.com)

SPECIAL BUYING! PRICE EFFECTIVE : 24-31 MAY 16

## SALE STARTS MONDAY

### RECENT NEWS

Market King now operates more than 1,050 supermarkets, including about 500 in-store pharmacies, plus nearly 1,400 Shoppers Drug Mart and Pharmaprix drug stores. The company also provides the President's Choice (grocery), Home Ease (food and household products) and Life Brand (health and wellness) private labels; PC Financial services; Joe Fresh fashion and apparel brand; and the PC Optimum customer loyalty program.

---

### BUNDLE

GET OUR SUPER VALUE BUNDLE FOR JUST

PRINTER, PAPER & INK BUNDLE

£59.40

GREAT SAVINGS



**HP PRINTER**

Print, copy and scan while saving space with a wireless all-in-one printer. Manage your printer effortlessly to an easy-to-use control panel. RRP £34.99



**HP INK**

Save up to 70 percent on ink using HP Instant Ink. RRP £8.49



**HP PAPER**

High quality HP A4 paper, 80gsm, Each ream contains 500 sheets. RRP £12.97



**GOLD LABEL WHISKEY**

£49.50

Pre Sale RRP: £45

WOW GREAT DEAL WAS

£55

---

**ORANGE GLAZED ROAST CHICKEN 1.5 Kg.**



£12.99

SAVE 15% LEFT

**GARDEN FRESH CARROTS 2 Kg.**



£2.59

SAVE 15% LEFT

**TWO WILD SEA BREAM 800 grams.**



£7.99

10% OFF

DEAL OF THE WEEK... DEAL OF THE WEEK... DEAL OF THE WEEK... DEAL OF THE WEEK...

BUY ONE GET ONE OTHER FREE!



**LUXURY CHEF KNIFE**

Buy this luxury chef knife and get another 'free'. This knife is made of hand crafted stainless steel and is both milled and sharpened by UK professionals. Get this great deal. RRP £12.

£20

## Appendix 10.

### The ten devised financial literacy items

- 
1. What is £4.50 divided by 10?
  2. How many £2.20 sweets can you buy for £33?
  3. What is 10% of £65?
  4. What is 12.5% of 70?
  5. How many £1.55 apples can you buy with £11.20?
  6. What is 20% of 125?
  7. What percentage is £25 of £75?
  8. What is 5.5% taken off £35?
  9. What % is £3.5 of £70?
  10. What is 12% of 4.50?
-



**Appendix 11.**

Between promotion parameter estimates in predicting IRP malleability

	<i>Drip Pricing</i>			<i>Value-Based Pricing</i>			<i>BOGDIF</i>			<i>Bundling</i>			<i>Control</i>		
	Std. B	t	Sig.	Std. B	t	Sig.	Std. B	t	Sig.	Std. B	t	Sig.	Std. B	t	Sig.
(Constant)		0.834	.406		2.337	<b>.021</b>		0.387	.699		0.632	.528		0.851	.396
Gender	-0.017	-0.353	.724	-0.106	-1.999	.047	0.038	0.527	.599	0.093	1.643	.102	0.019	0.55	.583
Age	-0.046	-0.547	.585	0.002	0.021	.983	-0.016	-0.129	.898	0.06	0.609	.544	-0.111	-1.813	.072
Education Level	0.012	0.217	.828	0.022	0.362	.718	0.075	0.904	.367	0.006	0.086	.932	0.017	0.411	.682
Social Class	0.006	0.109	.913	-0.024	-0.378	.706	-0.037	-0.43	.667	-0.014	-0.213	.832	0.03	0.719	.473
Extraversion	0.035	0.71	.479	-0.046	-0.875	.383	-0.075	-1.039	.301	-0.012	-0.204	.838	-0.007	-0.188	.851
Agreeableness	-0.04	-0.772	.441	0.059	1.016	.311	0.14	1.803	.073	-0.08	-1.309	.193	0.01	0.27	.787
Neuroticism	-0.001	-0.009	.993	-0.032	-0.509	.611	0.116	1.37	.173	0.013	0.187	.852	0.009	0.226	.821
Conscientiousness	0.049	0.988	.325	0.085	1.572	.118	0.065	0.882	.379	0.022	0.379	.705	0.074	2.067	<b>.040</b>
Openness to Experience	-0.026	-0.541	.589	0.014	0.261	.795	0.023	0.316	.753	0.095	1.668	.097	-0.01	-0.281	.779
Consumerism	0.154	0.239	.811	0.442	0.63	.530	-0.136	-0.142	.887	-1.377	-1.84	<b>.048</b>	0.113	0.244	.808
NFC	1.51	2.673	<b>.008</b>	1.4	2.25	<b>.026</b>	2.235	2.665	<b>.009</b>	-0.923	-1.366	.174	0.022	0.053	.958
FII	-1.547	-3.073	<b>.003</b>	-2.034	-2.376	<b>.019</b>	-2.166	-2.556	<b>.049</b>	0.803	0.878	.381	0.095	-0.168	.867
Financial Literacy Exposure	-1.099	-1.394	.165	-1.574	-2.859	<b>.005</b>	-1.464	-1.255	.211	0.495	0.835	.405	0.241	0.66	.510
Condition Consumer	0.714	2.161	<b>.032</b>	0.161	0.449	.654	0.49	1.002	.318	0.203	0.528	.598	-0.196	-0.81	.419
Experience*FII Consumer	-0.746	-1.008	.315	-0.557	-0.688	.493	0.031	0.028	.978	0.078	0.09	.928	-1.253	-2.315	<b>.022</b>
Experience*NFC Consumer	2.044	2.394	<b>.018</b>	1.425	1.519	.131	0.415	0.326	.745	0.067	0.067	.946	1.262	2.03	<b>.044</b>
Experience*Financial Literacy Consumer	-1.476	-2.402	<b>.018</b>	-1.556	-2.307	<b>.022</b>	-0.378	-0.41	.682	0.586	0.816	.416	0.074	0.166	.868
Experience*Exposure	0.266	0.875	.383	0.362	1.09	.277	0.236	0.52	.604	0.852	2.405	<b>.017</b>	-0.107	-0.484	.629
IRP Malleability	-0.095	-0.499	.618	-0.398	-1.909	<b>.051</b>	-0.665	-2.339	<b>.021</b>	-0.91	-3.878	<b>.000</b>	-0.064	-0.409	.683
FFI*NFC	-1.922	-3.266	<b>.001</b>	-1.414	-2.214	<b>.028</b>	-1.742	-2.007	<b>.047</b>	1.009	1.448	.150	0.145	0.339	.735
NFC*Exposure	-0.285	-0.487	.627	0.486	0.775	.439	-0.012	-0.014	.989	0.413	0.617	.538	-0.283	-0.659	.511
FFI*Exposure	-0.627	-0.919	.360	-0.671	-0.897	.371	-0.391	-0.382	.703	-0.33	-0.414	.680	0.661	1.335	.184

Financial Literacy*NFC		-1.731	-1.753	.082	-2.424	-2.234	<b>.027</b>	-2.612	-1.775	.078	0.995	0.857	.393	-0.47	-0.657	.512
Financial Literacy*FII		5.005	3.324	<b>.001</b>	6.016	3.65	<b>.000</b>	4.735	2.115	<b>.036</b>	-2.133	-1.2	.232	-0.055	-0.051	.959
Deviation of IRP from RRP's		-0.743	-11.275	<b>.000</b>	-0.608	-10.93	<b>.000</b>	0.013	0.143	.886	-0.633	-10.099	<b>.000</b>	-0.875	-22.586	<b>.000</b>
	<i>R</i> <sup>2</sup>		0.692			0.631			0.317			0.581			0.838	
	Adjusted <i>R</i> <sup>2</sup>		0.641			0.57			0.203			0.511			0.811	
Model Statistics	<i>F</i>		13.595			10.32			2.8			8.36			31.275	
	Sig.		<b>.000</b>			<b>.000</b>			<b>.000</b>			<b>.000</b>			<b>.000</b>	

## Appendix 12.

Summary of between-promotion effects indicating the significance of predictor variables to  
EUSDs

		Mean Square	F	Sig.	Partial Eta <sup>2</sup>
Corrected Model	Drip Pricing EUSD	6.444	16.523	.000	.608
	BOGOF EUSD	5.314	13.336	.000	.556
	Bundling EUSD	5.210	14.561	.000	.578
	Value-Based EUSD	7.318	19.422	.000	.646
	Control EUSD	.042	.923	.536	.080
Intercept	Drip Pricing EUSD	.025	.065	.799	.000
	BOGOF EUSD	.004	.011	.916	.000
	Bundling EUSD	.005	.014	.907	.000
	Value-Based EUSD	.030	.079	.780	.001
	Control EUSD	7.762	.000	.997	.000
Gender	Drip Pricing EUSD	.211	.541	.463	.004
	BOGOF EUSD	.904	2.268	.134	.015
	Bundling EUSD	.283	.791	.375	.005
	Value-Based EUSD	.440	1.169	.281	.008
	Control EUSD	.219	4.815	.030	.031
Age	Drip Pricing EUSD	.116	.298	.586	.002
	BOGOF EUSD	.098	.245	.621	.002
	Bundling EUSD	.004	.012	.914	.000
	Value-Based EUSD	.071	.188	.665	.001
	Control EUSD	.011	.234	.629	.002
Income (£)	Drip Pricing EUSD	.012	.031	.860	.000
	BOGOF EUSD	.044	.110	.740	.001
	Bundling EUSD	.068	.190	.664	.001
	Value-Based EUSD	.025	.066	.798	.000
	Control EUSD	.072	1.591	.209	.011
Social Class	Drip Pricing EUSD	.245	.627	.430	.004
	BOGOF EUSD	.556	1.394	.240	.009
	Bundling EUSD	.606	1.694	.195	.011
	Value-Based EUSD	1.516	4.023	.047	.026
	Control EUSD	.003	.061	.804	.000
Highest Level of Education Obtained	Drip Pricing EUSD	.005	.014	.906	.000
	BOGOF EUSD	.040	.100	.752	.001
	Bundling EUSD	.125	.351	.555	.002
	Value-Based EUSD	.114	.301	.584	.002
	Control EUSD	.065	1.427	.234	.009
Brand Affinity	Drip Pricing EUSD	26.048	66.783	.000	.309
	BOGOF EUSD	8.721	21.885	.000	.128
	Bundling EUSD	8.127	22.713	.000	.132
	Value-Based EUSD	17.022	45.174	.000	.233

	Control EUSD	.013	.281	.597	.002
Agreeableness	Drip Pricing EUSD	1.371	3.515	.063	.023
	BOGOF EUSD	2.775	6.965	.009	.045
	Bundling EUSD	2.605	7.281	.008	.047
	Value-Based EUSD	2.825	7.496	.007	.048
	Control EUSD	.049	1.068	.303	.007
Conscientiousness	Drip Pricing EUSD	.145	.372	.543	.002
	BOGOF EUSD	.007	.017	.896	.000
	Bundling EUSD	.056	.156	.693	.001
	Value-Based EUSD	.510	1.354	.246	.009
	Control EUSD	.025	.544	.462	.004
Extraversion	Drip Pricing EUSD	.170	.435	.511	.003
	BOGOF EUSD	.197	.495	.483	.003
	Bundling EUSD	.372	1.041	.309	.007
	Value-Based EUSD	.162	.430	.513	.003
	Control EUSD	.032	.692	.407	.005
Neuroticism	Drip Pricing EUSD	.003	.007	.936	.000
	BOGOF EUSD	.082	.205	.651	.001
	Bundling EUSD	.001	.002	.967	.000
	Value-Based EUSD	.136	.360	.550	.002
	Control EUSD	.004	.081	.776	.001
Openness to Experience	Drip Pricing EUSD	.104	.266	.607	.002
	BOGOF EUSD	.087	.218	.641	.001
	Bundling EUSD	.132	.368	.545	.002
	Value-Based EUSD	.030	.079	.779	.001
	Control EUSD	.106	2.329	.129	.015
Store Favouritism	Drip Pricing EUSD	5.810	14.895	.000	.091
	BOGOF EUSD	10.106	25.362	.000	.145
	Bundling EUSD	8.772	24.516	.000	.141
	Value-Based EUSD	6.771	17.971	.000	.108
	Control EUSD	.003	.065	.800	.000
Price Difference	Drip Pricing EUSD	4.845	12.422	.001	.077
	BOGOF EUSD	2.869	7.200	.008	.046
	Bundling EUSD	3.882	10.849	.001	.068
	Value-Based EUSD	8.934	23.709	.000	.137
	Control EUSD	.082	1.794	.182	.012
Store Favouritism*Price Difference	Drip Pricing EUSD	9.047	23.196	.000	.135
	BOGOF EUSD	1.855	4.654	.033	.030
	Bundling EUSD	1.848	5.165	.024	.034
	Value-Based EUSD	9.604	25.488	.000	.146
	Control EUSD	.028	.611	.436	.004

*R Squared = .608 (Adjusted R Squared = .571)*

### Appendix 13.

Purchase intention scale measuring the likelihood that a consumer will buy a product he/she is knowledgeable of, per the scale used by Dodds, Monroe, and Grewal (1991)

- 6 = very strong agreement
- 5 = moderate agreement
- 4 = slight agreement
- 3 = neither agreement nor disagreement
- 2 = moderate disagreement
- 1 = very strong disagreement

Q. Number	Question
1	The likelihood of purchasing this product is . . .
2	If I were going to buy this product, I would consider buying the model at the price shown.
3	At the price shown, I would consider buying the product.
4	The probability that I would consider buying the product is . . .
5	My willingness to buy the product is . . .
6	If I were going to buy a _____, the probability of buying this model is . . .
7	I would purchase this _____.

**Appendix 14.**

Between-subject effects in predicting purchase intentions as a function of price promotions and the optimality of the prices presented

		Optimal Pricing					Sub-Optimal Pricing				
		Sum of Squares	M <sup>2</sup>	F	Sig.	Partial Eta <sup>2</sup>	Sum of Squares	M <sup>2</sup>	F	Sig.	Partial Eta <sup>2</sup>
Corrected Model	Drip Pricing	1251.50	89.39	2.73	<b>.004</b>	0.41	2810.70	200.76	10.83	<b>.000</b>	0.60
	Value-Based Pricing	1468.55	104.90	3.06	<b>.002</b>	0.44	2668.24	190.59	9.47	<b>.000</b>	0.57
	Bundling	1078.58	77.04	1.53	.133	0.28	3522.07	251.58	12.33	<b>.000</b>	0.64
	BOGDIF	157.92	11.28	0.65	.814	0.14	157.97	11.28	0.85	.612	0.11
	Control	1231.40	87.96	1.50	.143	0.28	1225.24	87.52	1.75	.057	0.20
Intercept	Drip Pricing	263.86	263.86	8.05	<b>.006</b>	0.13	139.20	139.20	7.51	<b>.007</b>	0.07
	Value-Based Pricing	396.44	396.44	11.55	<b>.001</b>	0.18	155.60	155.60	7.73	<b>.007</b>	0.07
	Bundling	613.36	613.36	12.15	<b>.001</b>	0.18	121.23	121.23	5.94	<b>.017</b>	0.06
	BOGDIF	204.61	204.61	11.71	<b>.001</b>	0.18	440.32	440.32	33.24	<b>.000</b>	0.25
	Control	1130.35	1130.35	19.26	<b>.000</b>	0.26	150.37	150.37	3.01	.086	0.03
Gender	Drip Pricing	41.49	41.49	1.27	.265	0.02	10.72	10.72	0.58	.449	0.01
	Value-Based Pricing	164.82	164.82	4.80	<b>.033</b>	0.08	12.71	12.71	0.63	.429	0.01
	Bundling	64.41	64.41	1.28	.264	0.02	2.91	2.91	0.14	.707	0.00
	BOGDIF	24.11	24.11	1.38	.245	0.02	1.74	1.74	0.13	.718	0.00
	Control	89.50	89.50	1.52	.222	0.03	0.97	0.97	0.02	.889	0.00
Age	Drip Pricing	1.97	1.97	0.06	.807	0.00	3.67	3.67	0.20	.657	0.00
	Value-Based Pricing	41.94	41.94	1.22	.274	0.02	104.95	104.95	5.21	<b>.025</b>	0.05

	Bundling	21.23	21.23	0.42	.519	0.01	26.13	26.13	1.28	.260	0.01
	BOGDIF	30.07	30.07	1.72	.195	0.03	0.00	0.00	0.00	.988	0.00
	Control	14.39	14.39	0.25	.623	0.00	6.89	6.89	0.14	.711	0.00
Education Level	Drip Pricing	47.77	47.77	1.46	.232	0.03	1.23	1.23	0.07	.797	0.00
	Value-Based Pricing	10.78	10.78	0.31	.578	0.01	62.56	62.56	3.11	.081	0.03
	Bundling	5.19	5.19	0.10	.750	0.00	0.90	0.90	0.04	.834	0.00
	BOGDIF	1.53	1.53	0.09	.768	0.00	60.56	60.56	4.57	<b>.035</b>	0.04
	Control	25.95	25.95	0.44	.509	0.01	8.13	8.13	0.16	.687	0.00
Social Class	Drip Pricing	11.58	11.58	0.35	.555	0.01	16.31	16.31	0.88	.351	0.01
	Value-Based Pricing	23.44	23.44	0.68	.412	0.01	118.29	118.29	5.88	<b>.017</b>	0.06
	Bundling	0.20	0.20	0.00	.951	0.00	42.47	42.47	2.08	.152	0.02
	BOGDIF	3.34	3.34	0.19	.664	0.00	10.40	10.40	0.78	.378	0.01
	Control	136.48	136.48	2.33	.133	0.04	0.12	0.12	0.00	.960	0.00
Extraversion	Drip Pricing	15.68	15.68	0.48	.492	0.01	20.58	20.58	1.11	.295	0.01
	Value-Based Pricing	45.29	45.29	1.32	.256	0.02	155.97	155.97	7.75	<b>.006</b>	0.07
	Bundling	0.02	0.02	0.00	.984	0.00	98.41	98.41	4.82	.030	0.05
	BOGDIF	4.55	4.55	0.26	.612	0.00	7.11	7.11	0.54	.466	0.01
	Control	246.66	246.66	4.20	.045	0.07	87.66	87.66	1.76	.188	0.02
Agreeableness	Drip Pricing	1.27	1.27	0.04	.845	0.00	3.06	3.06	0.17	.685	0.00
	Value-Based Pricing	4.61	4.61	0.13	.715	0.00	14.45	14.45	0.72	.399	0.01
	Bundling	40.81	40.81	0.81	.373	0.01	2.92	2.92	0.14	.706	0.00
	BOGDIF	12.15	12.15	0.70	.408	0.01	0.45	0.45	0.03	.855	0.00

Neuroticism	Control	1.16	1.16	0.02	.889	0.00	4.43	4.43	0.09	.766	0.00
	Drip Pricing	4.24	4.24	0.13	.720	0.00	0.90	0.90	0.05	.826	0.00
	Value-Based Pricing	5.78	5.78	0.17	.683	0.00	0.02	0.02	0.00	.974	0.00
	Bundling	2.50	2.50	0.05	.825	0.00	25.36	25.36	1.24	.268	0.01
	BOGDIF	28.66	28.66	1.64	.206	0.03	14.06	14.06	1.06	.305	0.01
	Control	0.01	0.01	0.00	.991	0.00	99.94	99.94	2.00	.160	0.02
Conscientiousness	Drip Pricing	0.55	0.55	0.02	.898	0.00	35.93	35.93	1.94	.167	0.02
	Value-Based Pricing	21.46	21.46	0.63	.433	0.01	11.10	11.10	0.55	.459	0.01
	Bundling	20.91	20.91	0.41	.523	0.01	0.83	0.83	0.04	.841	0.00
	BOGDIF	4.73	4.73	0.27	.605	0.00	10.93	10.93	0.83	.366	0.01
	Control	76.44	76.44	1.30	.259	0.02	115.04	115.04	2.31	.132	0.02
Openness To Experience	Drip Pricing	86.08	86.08	2.63	.111	0.05	0.39	0.39	0.02	.885	0.00
	Value-Based Pricing	104.79	104.79	3.05	.086	0.05	29.01	29.01	1.44	.233	0.01
	Bundling	62.75	62.75	1.24	.270	0.02	0.03	0.03	0.00	.968	0.00
	BOGDIF	2.74	2.74	0.16	.694	0.00	3.35	3.35	0.25	.616	0.00
	Control	15.33	15.33	0.26	.611	0.00	5.46	5.46	0.11	.741	0.00
Consumer Experience	Drip Pricing	45.82	45.82	1.40	.242	0.03	15.34	15.34	0.83	.365	0.01
	Value-Based Pricing	21.18	21.18	0.62	.436	0.01	13.24	13.24	0.66	.419	0.01
	Bundling	22.31	22.31	0.44	.509	0.01	29.18	29.18	1.43	.235	0.01
	BOGDIF	46.72	46.72	2.67	.108	0.05	7.04	7.04	0.53	.468	0.01
	Control	162.66	162.66	2.77	.102	0.05	150.24	150.24	3.01	.086	0.03



IRP Malleability	Drip Pricing	304.40	304.40	9.29	<b>.004</b>	0.15	268.07	268.07	14.46	<b>.000</b>	0.13
	Value-Based Pricing	193.46	193.46	5.64	<b>.021</b>	0.09	211.40	211.40	10.50	<b>.002</b>	0.10
	Bundling	269.47	269.47	5.34	<b>.025</b>	0.09	116.16	116.16	5.69	<b>.019</b>	0.05
	BOGDIF	0.50	0.50	0.03	.866	0.00	21.58	21.58	1.63	.205	0.02
	Control	217.17	217.17	3.70	.060	0.06	78.66	78.66	1.58	.212	0.02
Brand Affinity	Drip Pricing	7.60	7.60	0.23	.632	0.00	75.79	75.79	4.09	<b>.046</b>	0.04
	Value-Based Pricing	108.13	108.13	3.15	.082	0.06	153.49	153.49	7.63	<b>.007</b>	0.07
	Bundling	105.88	105.88	2.10	.153	0.04	194.75	194.75	9.55	<b>.003</b>	0.09
	BOGDIF	12.01	12.01	0.69	.411	0.01	5.29	5.29	0.40	.529	0.00
	Control	19.85	19.85	0.34	.563	0.01	75.10	75.10	1.51	.223	0.01
Brand Affinity x IRP Malleability	Drip Pricing	13.74	13.74	0.42	.520	0.01	876.40	876.40	47.27	<b>.000</b>	0.32
	Value-Based Pricing	43.97	43.97	1.28	.263	0.02	659.91	659.91	32.78	<b>.000</b>	0.25
	Bundling	7.16	7.16	0.14	.708	0.00	654.84	654.84	32.10	<b>.000</b>	0.24
	BOGDIF	0.04	0.04	0.00	.961	0.00	42.38	42.38	3.20	.077	0.03
	Control	108.31	108.31	1.85	.180	0.03	109.45	109.45	2.19	.142	0.02
Exposure	Drip Pricing	584.10	584.10	17.83	<b>.000</b>	0.25	283.56	283.56	15.29	<b>.000</b>	0.13
	Value-Based Pricing	499.44	499.44	14.55	<b>.000</b>	0.21	128.58	128.58	6.39	<b>.013</b>	0.06
	Bundling	359.55	359.55	7.12	<b>.010</b>	0.12	365.06	365.06	17.90	<b>.000</b>	0.15
	BOGDIF	1.05	1.05	0.06	.808	0.00	3.33	3.33	0.25	.617	0.00
	Control	180.24	180.24	3.07	.085	0.05	159.25	159.25	3.19	.077	0.03
Error	Drip Pricing	1769.13	32.76				1835.48	18.54			

	Value-Based Pricing	1853.74	34.33	1992.75	20.13
	Bundling	2726.64	50.49	2019.45	20.40
	BOGDIF	943.39	17.47	1311.36	13.25
	Control	3169.68	58.70	4938.70	49.89
	Drip Pricing	29512.00		31849.00	
	Value-Based Pricing	34427.00		41633.00	
Total	Bundling	41840.00		46203.00	
	BOGDIF	16091.00		25992.00	
	Control	20870.00		28201.00	
	Drip Pricing	3020.64		4646.18	
	Value-Based Pricing	3322.29		4660.99	
Corrected Total	Bundling	3805.22		5541.52	
	BOGDIF	1101.30		1469.33	
	Control	4401.07		6163.94	

## Appendix 15.

The self-reported, five-item, financial literacy scale, based on Lusardi's (2008) four item scale. In addition, five numerical reasoning questions are presented to measure real financial literacy

Exceptionally Low 1	Very Low 2	Moderately Low 3	Low 4	Neither Low/High 5	Good 6	Moderately Good 7	Very Good 8	Exceptionally Good 9
---------------------------	------------------	------------------------	----------	--------------------------	-----------	-------------------------	-------------------	----------------------------

- 1) How would you rate your ability at calculating percentages?
- 2) Do you rate your ability to solve numerical problems easily and efficiently?
- 3) How do you rate your ability to understand long-term compound interest?
- 4) How do you rate your general ability with arithmetic?
- 5) How do you rate your ability in working out your budgets and funds?
  
- 6) Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?  
*More than \$102*  
*Exactly \$102*  
*Less than \$102*  
*Do not Know*  
*Refuse to Answer*
  
- 7) Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?  
*More than today*  
*Exactly the same*  
*Less than today*  
*Do not Know*  
*Refuse to Answer*
  
- 8) Buying a single company's stock usually provides a safer return than a stock mutual fund.  
*True*  
*False*  
*Do not Know*  
*Refuse to Answer*
  
- 9) If interest rates rise, what will typically happen to bond prices?  
*They will rise*  
*They will fall*  
*They will stay the same*  
*There is no relationship between bond prices and the interest rate*  
*Do not know*  
*Refuse to answer*


## Appendix 16.

Eleven attitudinal items of the affections held toward the participants favourite and least favourite retailers

Strongly Disagree 1	Disagree 2	Neither Disagree/Agree 3	Agree 4	Strongly Agree 5	
		Favourite Retailer	Least Favourite Retailer		
They want your money?					
They are loyal to their consumers?					
They always offer you the best deals?					
Their prices are fair and representative?					
They reward you often?					
You trust what they say about their products?					
The quality of their products is as advertised?					
Their promotions are fair?					
They offer you great value for money?					
Their customer service is exceptional?					
They offer you a great variety of products?					

## Appendix 17.

Christmas dinner shopping list for participants to purchase



# Shopping List

1x Champagne

3x Red Wine

Veg: 1x Red onion, 5x Tomatoes, 2x Garlic

4x Mushrooms

1x Gourmet Cheese, 1x Luxury Salami

1x Large Pot of Ice-Cream

2x Pasta

2x Soup + 10x Bread Rolls

1x Large Pack of Prawns

2x Soft Drinks (large bottle)

## **Appendix 18.**

The eleven core purchase drivers

- 
- 1) Price
  - 2) Quality
  - 3) Sat. Fat Content
  - 4) Fat Content
  - 5) Carb Content
  - 6) Sugar Content
  - 7) General Nutrition
  - 8) Calories
  - 9) Value for Money
  - 10) The Brand
  - 11) Variety
-

## Appendix 19.

A representative screenshot of the virtual supermarket simulation.



## Appendix 20.

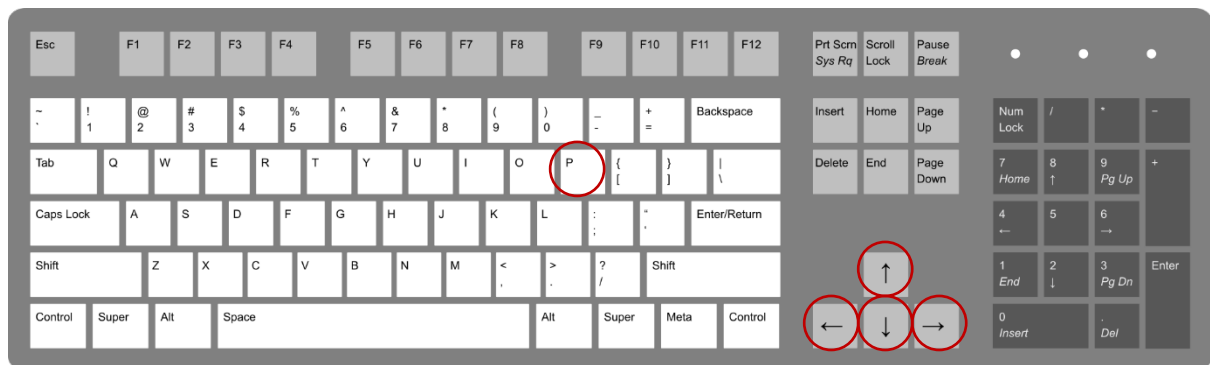
### My supermarket simulation pre-engagement script

Welcome to the virtual supermarket, an experiment designed to test your shopping behaviours. There will four parts to this experiment.

- 1) You will have three minutes to study and play around in the virtual environment. Please read the instructions to learn about movement mechanisms.
- 2) You will answer questions related to your general shopping behaviour before being presented with a scenario from which you will begin to shop.
- 3) You will enter the virtual environment and begin the shopping process.
- 4) There will be a few post-shopping questions to indicate your thoughts on the process.

The whole experiment will last roughly 40 minutes. Please be accurate but quick.

### Movement Mechanics



The arrow keys allow you to move your trolley

The 'P' button opens the basket and allows you to remove contents

The mouse allows you to hover over and click on items

Clicking on an item adds it to the basket

Click the info sign to bring up the products info (below)



Click the GDA graph to open nutritional contents



Bring your basket to the checkout to complete the simulation



## Appendix 21.

Promotional tags used in the virtual supermarket simulation



*Bundling Promotion Tag*



*BOGDIF Promotion Tag*



*Control Promotion Tag*



*Drip Pricing Promotion Tag*



*Value-Based Promotion Tag*

## Appendix 22.

Standardized parameter estimates ( $\beta$ ) of the indirect effects between the predictor and outcome variables, significance determined by Sobel test

Predictor	Control				BOGDIF				Value-Based				Bundling				Drip Pricing			
	Brand Affinity	UIP	IRP Mall.	TUP	Brand Affinity	UIP	IRP Mall.	TUP	Brand Affinity	UIP	IRP Mall.	TUP	Brand Affinity	UIP	IRP Mall.	TUP	Brand Affinity	UIP	IRP Mall.	TUP
Conscientiousness	-.010	.003		.003	-.009	.003		.003	-.012	.004		.004	-.012	.004		.004	-.010	.005		.004
Neuroticism	<b>-.022</b>	.007		.006	-.018	.007		.006	-.019	.006		.006	<b>-.020</b>	.007		.007	<b>-.020</b>	.009		.008
Consumer Exp.	.019	.006	-	.006	.015	.006	<b>.034</b>	.006	.016	.005	<b>.033</b>	.006	.018	.007	<b>.037</b>	.007	.014	.007	<b>.031</b>	.007
Financial Literacy (Real)			-	-.001			<b>.022</b>	-.001			<b>.025</b>	-.001			<b>.024</b>	-.001			<b>.027</b>	-.001
Financial Literacy (Self-Report)	<b>-.026</b>	.008		.011	<b>-.021</b>	.008		.010	<b>-.023</b>	.008		.010	<b>-.020</b>	.007		.010	<b>-.024</b>	.011		.015
Extraversion			<b>.041</b>	-.001			<b>.038</b>	-.001			<b>.041</b>	-.001			<b>.038</b>	-.001			<b>.036</b>	-.001
Social Class			<b>.025</b>	-.001			<b>.028</b>	-.001			<b>.029</b>	-.001			<b>.025</b>	-.001			<b>.028</b>	-.001
Education Level	-.005	.002	-	.001	-.006	.002	<b>.021</b>	.001	-.005	.002	-	.001	-.006	.002	-	.001	-.006	.003	-	.002
Openness to Exp.			<b>.047</b>	-.001			<b>.038</b>	-.001			<b>.048</b>	-.001			<b>.045</b>	-.001			<b>.062</b>	-.002
Price Optimality		<b>.072</b>		<b>.193*</b>		<b>.072</b>		<b>.189*</b>		<b>.076</b>	.000	<b>.209*</b>		<b>.080</b>		<b>.223*</b>		<b>.097</b>		<b>.263*</b>
NFC		<b>.020</b>		.018		<b>.020</b>		.018		.018	.000	.017		<b>.022</b>		<b>.020</b>		<b>.025</b>		<b>.023</b>
Psych. Distance				<b>-.042</b>				<b>-.058</b>				<b>-.053</b>				<b>-.054</b>				<b>-.072</b>
Brand Affinity				<b>-.291*</b>				<b>-.325*</b>				<b>-.308*</b>				<b>-.341*</b>				<b>.425*</b>
FFI				-.003				-.003				-.003				-.003				-.005

**00\*** = highly significant (p<.025)

**00** = significant (p<.045 - .025)

**00** = marginally significant (p<.05 - .045)

### Appendix 23.

Descriptives and frequencies of the primary causes for biased decision-making (TUP)

Primary Cause for Bias	Frequency	Percent	Cumulative Percent	Percentage Attributed to the Primary Cause	Frequency	Percent	Cumulative Percent
Price	97	43.3	43.3	13.0	14	6.3	6.3
Quality	4	1.8	45.1	14.0	20	8.9	15.2
Value for Money	69	30.8	75.9	15.0	17	7.6	22.8
Sugar Content	5	2.2	78.1	16.0	16	7.1	29.9
The Brand	2	.9	79.0	17.0	16	7.1	37.1
Nutrition	47	21.0	100.0	18.0	22	9.8	46.9
				19.0	20	8.9	55.8
				20.0	19	8.5	64.3
				21.0	19	8.5	72.8
				22.0	31	13.8	86.6
				23.0	7	3.1	89.7
				24.0	3	1.3	91.1
				25.0	6	2.7	93.8
				26.0	8	3.6	97.3
				27.0	3	1.3	98.7
				28.0	3	1.3	100.0