Perceived Price and its Effect on Product Quality, Product Assortment and Customer Satisfaction

Abstract (<150 words)

This paper presents a quantitative study investigating the effect of perceived price on product quality and product assortment and the resultant impact on customer satisfaction. A cross-sectional data was collected from a convenience sample of shoppers in food retail stores in Johannesburg, South Africa using a self-administered structured questionnaire. A total of 280 questionnaires was returned, yielding an 89.2% response rate which is suitable for multivariate data analysis techniques. The results show a strong effect of product quality on customer satisfaction; customers' perceptions of price has a strong effect on their evaluation of product assortment. The South African food retailers' product quality, perceived price and product assortment meet customer needs, with perceived price influencing customers' evaluation of product assortment by helping customers to find the products they want. This paper contributes to the customer satisfaction literature through investigation of store image attributes which are useful in improving customer satisfaction.

Keywords – perceived price, product quality, product assortment, customer satisfaction.

1. Introduction

Satisfaction is a key feature of customer and retail management and is a composition factor in consumer research and retail marketing studies (Theodoridis & Chatzipanagiotou, 2009). Even the research study of on service quality has established the domain of customer satisfaction by including the marketing mix elements (i.e. quality, convenience and price) into its definition (Athanassopoulos, Gounaris & Stathopoulos, 2001). Customer satisfaction is viewed by Lamb, Hair McDaniel, Boshoff, Terblanche, Elliot and Klopper (2010) as the primary aim of universal successful marketing activities, which retailers have globally striven to achieve.

Despite the steadily rising number of research studies examining the effects of store attributes on customer satisfaction, there is little research on perceived price and its effect on customers' evaluation of product quality (Beneke, 2010) and product assortment (Rudiene, Macerinskiene & Macerinskas, 2016). Prior studies have examined the effects of store attributes on consumer satisfaction, however, many of these studies limit focus on how the customer's evaluation of the store attributes directly impact their satisfaction with the product and/or services.

To close the gap in the literature, the current study contributes insights on how the perception of price influences the customer's evaluation of product quality and product assortment. The current research rarely examines the various interactions between store attributes and the way these combinations affect customer satisfaction (Moliner-Velazquez, Fuentes-Blasco, Servera -Frances & Gil-Saura, 2019; Mwangi, Kabare & Wanjau, 2019; Rabo & Ang, 2018). This may not be surprising, given the variety of store image attributes (cleanliness, atmosphere, product, service quality, price and choice, etc.) that have effects on satisfaction of customers. However, it is important for retailers not only to understand the effects of these attributes on customer satisfaction, but also to gain greater insights into the effects of consumers' perceptions of price and their subsequent evaluation of product quality and product assortment. Little is known about this topic, and still less in the context of emerging South Africa's food retail industry.

This paper begins to address these issues by investigating the effects of perceived price on consumers' evaluations of product quality and product assortment, and the resultant impact on customer satisfaction. In particular, the study examines the effects of store image attributes on customer satisfaction in the food retail industry. The study proposes that customers' overall perception of the price and the resultant evaluation of product quality and product assortment, will influence their satisfaction, thereby improving the store patronage. This is a key desirable outcome in the highly competitive South African food retail market. In turn, it will contributes to the development of a competitive advantage and increased profitability for the retail store.

South Africa remains the third biggest market of food and grocery products following India and China, and its retail sector is growing rapidly. The independent and informal sector of this market was expected to grow from R73.9 billion in 2010 to R115.6 billion in 2013, which is an increase of 45% (Stofile, Mushatu, Nair, Daniels, Goosen, Khalil & Essa, 2011). Since the Gross Lettable Area (GLA) of retail space was extended in 2002 from 6.5 metres squared to 23 metres squared in 2016, regional and super regional malls have secured large parts of this space (Brown & Hasson, 2017). As a result, the South African Reserve Bank has estimated that the nominal GDP growth will raise from 5.8% in 2017 to 6.7% in 2019 (Brown & Hasson, 2017).

Firms are developing strategies to exploit the spending power of the emergent black middle class (de Bruyn & Freathy, 2011), which continues to grow and demand high value consumer goods (Geller & Ntloedibe, 2017). This growth has prompted researchers' interest towards a research study that investigates the effects of store attributes on customer satisfaction. Due to limited research on the likelihood that a satisfied customer could leave a preferred brand and a

dissatisfied customer could stay with the brand (Seiders, Voss, Grawal & Godfrey, 2005), a major goal of retail management is to determine the factors influencing customer satisfaction to improve customers' long-term store patronage (Theodoridis & Chatzipanagiotou 2009). In order to satisfy the needs of consumers, retailers require understanding of the determinants of satisfaction, which can be derived from a variety of elements presented by their stores (Rabo & Ang, 2018; Beneke, Hayworth, Hobson & Mia, 2012).

Although consumers evaluate many store attributes presented when they consume the store's services (Athanassopoulos *et al.,* 2001), it has been argued by Amine and Cadenat (2003) that the retail elements that consumers are exposed to are, to a considerable extent, controlled by the retailer. These elements include price, employee services, product selection, range, colours and flavours. As a result, consumers may not evaluate the store variety rationally. However, customers do evaluate their preferred store pricing against that of competitors, and they do evaluate the relationship between price and value, always seeking the best price relating to product assortment and quality (Theodoridis & Chatzipanagiotou, 2009).

The investigation into the effects of perceived price on customers' evaluation of product quality and assortment, and the resultant impact on customer satisfaction will contributes to the body of knowledge on the effects of store attributes on customer satisfaction. The results are used to propose managerial recommendations on store image attributes to improve customers' in-store satisfaction in the context of the South African food retail industry. Customer satisfaction is related to price-insensitive customers who are loyal and demonstrate repurchasing behaviour, also recommending the firm to others (Nazari, Hosseini & Kalejahi, 2014).

The rest of the paper is presented as follows: Section 2 presents the literature review, theoretical background, the conceptual research model and the proposed hypotheses. Section 3, identified the problem investigated, Section 4 outlined the objectives of the study, Section 5 described the research methodology, and then the results are presented and interpreted in Section 6. The study concludes with practical and managerial implications in Section 7.

2. Literature review

Retail strategy is developed from a combination of 'store attributes' that apply to all the product categories (i.e. cleanliness and atmosphere) and those that do not (i.e. product, service quality, price and store choice) (Deka, 2018; Grewal, Levy & Kumar, 2009; Goldman, Ramaswami & Krider, 2002). Most of the research on store attributes has examined the critical combination of store attributes that influences consumer satisfaction in retail marketing (Athanassopoulos

et al., 2001). These studies have examined the antecedents of customer satisfaction such as the tangible attributes (product quality, product assortment, price, store facilities) and intangible attributes (physical environment, store layout, atmosphere, convenience) (Moliner-Velazquez *et al.,* 2019; Rabo & Ang, 2018; Paul, Sankaranarayanan & Mekoth, 2016).

The literature points the store attributes of product quality, product assortment, price paid and services as the predictors of choice of the store by customers (Matsa, 2011; Theodoridis & Chatzipanagiotou, 2009; Huddleston, Whipple, Mattic & Lee, 2009). In a recent study, Rabo and Ang (2018) found that the product quality and quantity of goods and services, customer experience and value for money significantly influence the satisfaction of customers. These results corroborates studies by Chakraborty and Sengupta (2014) and Evanchitzky, Sharma and Catja (2012) which found that product and service quality and value for money determine customer satisfaction. Beneke, Adams, Demetriou and Solomons (2011) observe that the store image attributes of service, product variety, and price are related to satisfaction of customers in the grocery market. Huddleston *et al.* (2009) report that pricing, product assortment and product quality have significant effects on customer satisfaction regardless of the type of stores (i.e. specialty stores or conventional stores), and the levels of these effects differ by store type.

However, despite the importance of customer satisfaction, few research studies have examined the effects of store attributes on customer satisfaction in the South African retail sector. Lalla, Cowden and Karodia (2015) identify eight factors determining customer satisfaction in the fast-moving consumer goods industry in Gauteng Province, South Africa, namely, (i) location, (ii) additional services, (iii) facility, (iv) product and service quality, (v) reliability, (vi) value for money or product price, (vii) process involving the elements such as number of checkout counters or express service checkout counters, operating hours and waiting time on the queue at the counter, and (viii) staff service. While many research studies have appeared previously in literature, the measurements were restricted to the relationship between store attributes and customer satisfaction rather than incorporating the effect of price on customer perceptions of product quality and product assortment. It has been argued by Kozak, Shengelia and Gribincea (2019) that increasing the price by manipulating the product assortment, and adding multiple number of intermediaries in the retail store value chain activities, could seriously undermine customers' interest. This could even have a serve impact when consider the purchasing of food products as customers could relate quality to the freshly produced merchandise variety.

Allaway, Huddleston, Whipple and Ellinger (2011) suggest that product quality and assortment influence consumer behaviour more than price, which is an important consideration for retailers seeking to build strong brand equity. Theodoridis and Chatzipanagiotou (2009) maintain that the store image attributes of product variety, quality and assortment are strong determinants of customer satisfaction. Integrating the sales requirements with market requirements in relation to product assortment and product quality is a key strategy of successful firms (Dragan & Ivana, 2018), which make it difficult to competitors to pinpoint the influence of product assortment and promotion on price and *vice versa* in their attempt to copy the strategy (Herrmann, Moeser & Weber, 2005) because their weights as critical store attributes that influence the customer's choice of a store does not apply equally across the purchasing situations and these weights may change rapidly (Amine & Cadenat, 2003). As such, competitors will struggle to determine the price based on creating structures for a subject-oriented price which accompany the preferences of stakeholders in relation to their expected rate of return and the product quality attributes from the views of consumers (Krivogina, Safonov & Kharitonov, 2019).

To help retailers achieve these competitive advantages, more research is needed on the effects of store attributes as predictors of customer satisfaction, with specific reference to price and its effect on perceptions of other store image attributes. This paper uses cognitive psychology theory to explain the relationship of price and its influence on perceptions of product quality and assortment, and the subsequent effect of these on customer satisfaction.

2.1 Theoretical Background, Conceptual Research Model, and Hypotheses

Cognitive psychology is a theory explaining the mental processing of the "memory, thought, problem solving, creative, perception, attention, and language use" (Yin, 2008:433). When used in the retail context, this theory posits that consumers round down prices or compare price digits from the left to right (Herrmann *et al.,* 2005:3), which supports the modelling of the effects of perception of price on customer satisfaction. Cognitive psychology views perception as the process of selecting, organising, interpreting and explaining stimuli and form meanings from them (Yin, 2008). It is widely accepted that a broad product assortment lead to customer's cognitive overload, which lowers satisfaction and stimulates choice elimination and switching. This effect will drive consumers to decide against their initial intent (Dornyei, Krystallis & Chrysochou, 2017; Lamberton & Diehl, 2013; Wang & Shukla, 2013), which helps modelling the effect of product assortment on customer satisfaction.

Simplified, cognitive psychology theory helps to explain the relationship of price and its effect on product quality, product assortment and customer satisfaction, as proposed by the research model in Figure 1.
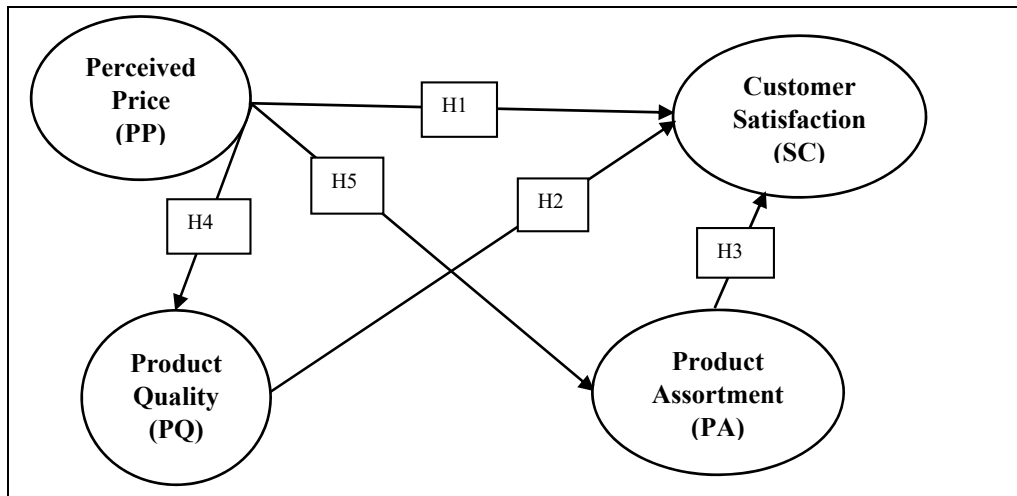
Figure 1. Proposed research model

Source: *Researcher's own model*

2.1.1 The Effect of Perceived Price on Customer Satisfaction

The 'marketing mix' (i.e. customer-oriented output) including price, is optimised for different market segments (Wright, 2019). Although the product, promotion and place of distribution create value for the seller, price captures this value and is the 'P' that collects revenue for the retailer (Khandelwal & Bajpai, 2012; Grewal *et al.,* 2009; McAfee, McMillan and Whinston, 1989). Kotler and Armstrong (2010) define price as the sum of the values or amount of money paid by a customer in exchange for the benefits of having a product or consuming a service.

Price has a major effect on consumer satisfaction, as value is the consumer's perceived ratio of benefits obtained against the price paid (Paul *et al.,* 2016). The amount of money that is paid or exchanged for the satisfaction of a need is considered as acceptable if the value of the product purchased is equal to or exceeds the price (Khandelwal & Bajpai, 2012; Marx & Erasmus, 2006). An increase in price, for instance, has been shown to have a negative impact on customer satisfaction (Malik, Ghafoor & Iqbal, 2012). Lalla *et al.* (2015) note that value for money is a key element that leads to satisfaction, as customers always think about the cost factor. It has been confirmed that customer satisfaction leads to willingness to pay a premium price (Beneke *et al.,* 2012; Naik, Gantasala & Prabhakar, 2010; Huddleston *et al.,* 2009). It is proposed that:

H1: Perceived price has a positive significant effect on customer satisfaction.

2.1.2 The Effect of Product Quality on Customer Satisfaction

Quality is defined as the holistic features and attributes of a product or a service that enhance its ability to satisfy a need (Kotler & Keller, 2011). From a holistic perspective in marketing and business, the customer demand for quality goods and services is high (Parasuraman, Berry & Zeithaml, 1992). Sophisticated customers demand high quality and more luxurious products as opposed to less sophisticated consumers, who are only interested in the bare necessities of the product and not keen to its quality (Chiliya, Herbst & Roberts-Lombard, 2009). However, due to the difficulty for consumers to make a complete and correct judgement of product quality (i.e. true quality ingredient of a food product), they evaluate products based on attributes relate with quality (Anselmsson, Johansson & Persson, 2007). New or improved products (quality, innovation, unique features) that present better choices to consumers (Huang & Huddleston, 2009), aid retailers to defeat price war (Huddleston *et al.,* 2009; Huang & Huddleston, 2009).

Quality is seen as "a customer satisfaction-composition attribute in the supermarket industry" insofar as improvements in product quality have only a small positive impact on customer satisfaction while decrease in quality of the same size have a significant likelihood to reduce customer satisfaction (Huddleston *et al.,* 2009:68). Product quality is the important attribute of customer satisfaction and customer loyalty (Juhl, Kristense and Ostergaard, 2002:330). Berne, Mugica and Rivera (2005) report that product quality plays a key role in large store samples and its effect on the overall satisfaction doubles the effect identified in the three samples. Prior research, studies (Mwangi *et al.,* 2019; Rabo & Ang, 2018; Lalla *et al.,* 2015) observe a positive significant effect of product quality on customer satisfaction and. It is proposed that:

H2: Product quality has a positive significant effect on customer satisfaction.

2.1.3 The Effect of Product Assortment on Customer Satisfaction

Retailers defines product assortment as "the sum of various items in a merchandise category" (Broniarczyk, Hoyer & McAlister, 1998). The strong impact of the product assortment's composition on retail sales and profits makes Product Assortment Planning (PAP) the retailers' top priority (Mantrala, Levy, Kahnc, Fox, Gaidarev, Dankworth & Shah, 2009). Firstly, the key strategic decision for retailing is to determine the number, and the kinds of product categories to sell. This establishes the major differentiating factor of store positioning and image in the marketplace (Glanz, Bader & Iyer, 2012; Amine & Cadenat, 2003). Secondly, the major focus of most Product Assortment Planning research is the assortment's depth, determining the sum of items in a merchandise category that a retailer must carry (Mantrala *et al.,* 2009; Grewal *et*

al., 2009). The depth of the assortment is determined by the number of product lines, the depth of the number of product groups in each line, the density of the number of product types in each group while the variety depends on the number of models within one type of product (Dragan & Ivana, 2018). Thirdly, the critical decision of the Product Assortment Plan is to establish and maintain service levels, or number of items of a specific stock-keeping unit (SKU) that a retailer must sell (Grewal *et al.,* 2009). This is because removing a consumers' favourite product will be noticed and may negatively affect their perception of the assortment category (Broniarczyk *et al.,* 1998). Borle, Boatwright, Kadane, Nunes and Shmueli (2005:616) believe that "efficient assortment," involving cost reductions related to decreasing the number of slow-selling items in a category, can increase the profitability for that category.

The breadth of the assortment requires it to satisfy the customers' needs (Rudiene *et al.,* 2016). Holding a reputation for product availability is another retail competitive advantage which also determines customer satisfaction (Matsa, 2011). To increase customer satisfaction, it is crucial for retailers to offer a large assortment to satisfy the consumer's first choice (Mantrala *et al.,* 2009). Berne *et al.* (2005) report that the effect of product assortment on customer satisfaction differs across samples. In the small format segment, the effect was significantly higher than in other samples. Huddleston *et al.* (2009) suggest that product assortment is the key determinant of customer satisfaction in conventional stores, confirming that large and deep assortments in promotions are essential. Prior research studies have emphasised that customers' perception of large product assortment affect store image and customer satisfaction (Wang & Shukla, 2013; Mantrala *et al.*, 2009; Theodoridis & Chatzipanagiotou, 2009). It is proposed that:

H3: Product assortment has a positive significant effect on customer satisfaction.

2.1.4 The Effect of Perceived Price on Product Quality

Perceived price is defined as "the customer's evaluation of a service's or a product's average price against those of competitors" (Ryu & Han, 2010). Perception of price, i.e. expensive or cheap, reasonable or unreasonable, determines the customer's buying decision (Han & Hyun, 2015). Marketing and economics theories differs in defining the role of price in consumer purchasing decisions. Marketers see price as a component of a product and with all its features being paid for, namely, value in use or utility, including non-price factors and exchange value, which determine the price acceptability, and consumer choice (Wright, 2019). Economists see price as a basic measure for efficient resource allocation, yet in most markets, consumers are interested in shopping rather than searching for products and services with lower prices (Matsa,

2011). Some researchers argue that high quality is more essential to consumers more than lower price, and improving product quality improves the store image (Grewal *et al.,* 2009; Huang & Huddleston, 2009). Huddleston *et al.* (2004) report that lower prices attract customers to a store but it is not the major reason for repurchase.

Consumers are willing to pay premium price in exchange for a high quality product (Taylor & Kimes, 2011). Price and product quality are the factors that drive store choice (Allaway *et al.,* 2011). If the quality of a product or price decreases, a high defection rate of regular buyers of this product category will occur, which could be explained by higher prices or lower product quality relative to competitors (Buckinx & Van den Poel, 2005). Consumers relate perception of price with retailers' product quality (Pilarz & Kot, 2019; Paul *et al.,* 2016; Kaura & Sharma, 2015). Beneke (2010) observes that customers perceive product quality and price as related components. It is proposed that:

H4: Perceived price has a positive significant effect on product quality.

2.1.5 The Effect of Perceived Price on Product Assortment

Based on assumptions of marketing knowledge, it is appropriate to suggest that consumers do not buy goods or services in the market exchange, but pay for tangible benefits and values from the entire assortment selection in the store (Pilarz & Kot, 2019). Product assortment and the structures of their price are significant store attributes (Krivogina *et al.,* 2019). Goodman and Malkoc (2012) believe that retailers with larger assortments are more likely to sell high quality products at higher prices. Retail strategy incorporates the management of large assortments of products. High turnover products used for price discounts can be driven to the point of loss-making to attract customer traffic in the store (Wright, 2019). Deviations from the assortment based on value are determined by converting the planned and realised quantities of assortments into value through the price plan (Dragan & Ivana, 2018).

In terms of online shopping, product information searches are determined by the sum of cues that consumers use such as price, and with the assortment size and attribute quantity expected to have an effect on the sum or holistic view of searched cues (Dornyei *et al.,* 2017). Amanah and Harahap (2018) note that product assortment and price predict 58.4% of the customer's online purchasing decisions. Although price did not significantly influence the online customer purchase decision in their study, these scholars concluded that product assortment significantly affected online consumers purchase decisions. It has been confirmed by Lamberton and Diehl (2013) that customers' perceived assortment similarity significantly and negatively affect their

price perception of the chosen product. Results show that assortment similarity perceptions moderate the effect of assortment organisation on prices paid. Rudiene *et al.* (2016) emphasise that the customers' perception of price is the most sensitive element of the assortment of goods. It is proposed that:

H5: Perceived price has a positive significant effect on product assortment.

2.1.6 Customer Satisfaction

Satisfaction refers to a customer's overall evaluation of the total purchases and consumption experiences of a product or a service over time (Garbarino & Johnson, 1999). This overall evaluation involves different elements such as the entire purchase process and the outcome (Paul *et al.,* 2016; Herrmann *et al.,* 2007). As satisfaction is influenced by the customer's overall subjective evaluation of the retail store, it is possible to define segments with various levels of satisfaction (Theodoridis & Chatzipanagiotou, 2009). This subjective evaluation is viewed as the outcome of a cumulative effort over the period of a customer's relationship with a retailer, rather than satisfaction with a specific transaction (Beneke *et al.,* 2011). Two views of satisfaction are transaction-specific view, which measures a customer's one-time, post-purchase encounter (Nazari *et al.,* 2014), and cumulative view, which measures a customer's overall evaluation of a service or a product based their previous encounters (Theodoridis & Chatzipanagiotou, 2009). In recent years there have been many papers describing customer satisfaction as the overall subjective judgment of the cumulative experience that a customer has with a product or a service rather than a transaction-specific encounter (Moliner-Velazquez *et al.,* 2019; Palaci, Salcedo & Topa, 2019; Rabo & Ang, 2018). Berne *et al.* (2005) mention that when assessing customer satisfaction as a predictor of their loyalty, cumulative satisfaction is a better measurement as it influences store loyalty directly. Customers' satisfactory shopping experience improves the cumulative satisfaction, which improves their attitudinal loyalty and behavioural loyalty (Paul *et al.,* 2016).

Process definitions of customer satisfaction are based on the expectancy disconfirmation model developed by Oliver (1981) to explain that positive disconfirmation and confirmation result in customer satisfaction, while negative disconfirmation results in dissatisfaction, which implies that satisfaction occurs not only when customers' expectations are fulfilled, but also when their expectations are not met but they still feel good about the performance of the product or service. In addition, when customers cannot find and buy a product that he or she prefers from other stores, they become willing to pay a high price for that product at another store and will still be

satisfied with that price (Huddleston *et al.,* 2009), which suggest that customer's judgements are affected by both the negative and positive affective (i.e. emotional) responses as well as cognitive disconfirmation (Marx & Erasmus, 2006).

3. Research Problem

The growth of the South African food retail sector is associated with intense competition as retailers compete to satisfy customers through various store image attributes (Durham, 2011; Beneke *et al.,* 2012). Allaway *et al*. (2011) note that retail stores seek the ideal combination of factors that maximise consumer-based brand equity to counter the challenges of competitors. To achieve this objective, a food retailer need to build a combination of store attributes that improve the image of the store, increase store choice and customer satisfaction (Allaway *et al*., 2011; Theodoridis & Chatzipanagiotou 2009).

Seeking to build a combination of store attributes, many food retail stores in South Africa such as DisChem, Truworths, Woolworths, Checkers and convenient stores such as 7-Eleven build distinct images on the basis of marketing strategy and store attributes. These retailers struggle to find a combination of price, product quality, and product assortment. For example, Pick 'n Pay offers Nescafé Ricoffy at a low price than Nescafé premium Gold brand, and it's no name brand priced the lowest. Despite the price range and quality attributes of these products, a limited shelf availability forces retailers carry these products on the same shelf to compete for customer's attention by offering value for money and satisfying their needs.

Despite the importance of customer satisfaction, few studies have examined the extent to which store attributes influence customer satisfaction in the grocery market, particularly from the perspective of emerging markets such as South Africa (Lalla *et al.,* 2015; Beneke *et al.,* 2012). Food retailers need more insights into the effect of store attribute such as perceived price on product quality and assortment and its effect on consumer satisfaction. Chiliya *et al.* (2009) note that research on this topic is essential in the market segmentation and targeting process. In every market segment, some customers are guided by price, and others by the level and quality of the product or service (Pilarz & Kot, 2019). These differences need to be analysed to better understand the effects of perceived price on customers' evaluation of product quality and product assortment. Hence additional studies are need to examine the store attributes that influence customer satisfaction. This study seeks to bridge this research gap by proposing a research framework that considers the effect of perceived price on product quality and assortment and the effect of this on customer satisfaction in the food retail market.

4. Research Objectives

From this problem, the objectives were (1) to investigate the overall satisfaction of customers in the grocer retail market with regard to the perceived price and its effect on product quality and product assortment, and (2) to examine the effect of perceived grocer retail market price on customers' evaluation of food quality and food assortment in the South Africa.

5. Research Methodology

5.1 Measurement

The current study adopts a quantitative research approach (Malhotra, 2007) and descriptive research design. Pre-test of self-administered questionnaire (N50) consisting of two sections was used to identify the problems encountered by the respondents and the length of time for completing the questionnaire. The pre-test results showed reliability of the questionnaire. The feedback obtained was used design the questionnaire for the survey. Two quantitative research field experts in the retail studies reviewed these results and the final questionnaire for approval.

Section 1 contained a screening question that asked if the respondent has shopped at the food retail store, and if so, to indicate the name of that store, which ensured that only respondents who shopped at the food retail stores in Johannesburg were part of the sample. The screening question was followed by demographic questions including gender, monthly income after tax, age and length of time shopping at that food retail store. A list of food retail stores was offered. The questions asked the respondent's shopping behaviour relating to that food retail store (e.g. frequency of shopping, etc.). Section 2 of the questionnaire asked questions measuring the store attributes. Perceived price was measured with three items, the measurements of product quality and product assortment had four items each, while customer satisfaction was measured with three items. All the items were adopted from scales validated in the prior study conducted by Huddleston *et al.* (2009), and measured the respondents' level of agreement with all the 14 items on a 5-point Likert scale (were 1 means strongly disagree and 5 means strongly agree).

5.2 Sampling and Data Gathering

This study used a face-to-face mall intercept survey to gather single, cross-sectional data from a non-probability convenience sample of shoppers who purchased from food retail stores in the city of Johannesburg in Gauteng Province, South Africa. The population of Gauteng Province is higher than in other provinces of South Africa (StatsSA, 2015). Gauteng Province contributes

the largest share to gross value added (GVA) of the total retail industry, which create more employment opportunities for young people (Quarterly Bulletin, 2012:30).

A total of 280 questionnaires were administered. This sample size is consistent with prior studies in the retail food sector (Lombart & Louis, 2014; Demoulin & Zidda, 2009; Amine & Cadenat, 2003). Data was collected over a period of two weeks by well-trained fieldworkers who explained the instructions, purpose and nature of the study to the respondents, who were assured of the confidentiality of their information. The structured questionnaire was issued for self-administering after the respondent gave a permission and assured that the participation in the survey is strictly voluntary. Their rights to refuse to participate or to withdraw were clearly explained. Illegible questionnaires were discarded and data was processed, edited, tabulated and coded into the Statistical Package of Social Science (SPSS) Version 25.0 for multivariate statistical techniques of the descriptive statistics, reliability and linear regression analysis.

6. Results

6.1 Descriptive Statistics

From 280 questionnaires distributed, 250 completed questionnaires were returned, giving an 89.2% response rate. The majority of the participants were aged between 20 and 29 (57.2%). The sample included more female (58.8%) than male (41.2%) participants. The majority of the respondents (58%) indicated a monthly income of R6 000 or more. Many respondents (49.6%) prioritised Pick 'n Pay food stores as their store choice over the past five years or longer but less than ten years.

6.2 Reliability Test

The descriptive statistics (using mean and standard deviation) and the reliability analysis of the constructs are presented on the Table 1. In order to assess the reliability of the measurement instrument, Cronbach's alpha efficient of 0.917 was found for product assortment, 0.916 for customer satisfaction, 0.896 for product quality and 0.865 for the perception of price. A coefficient alpha above 0.7 is considered acceptable, but above 0.8 is preferable (Pallant, 2010). The closer the Cronbach's alpha coefficient is to 1, the higher the internal consistency and reliability (Pallant, 2010). The means of the items in the variables all ranged between 3 and 4. Product assortment had the highest mean (M = 0.418; SD = 0.850) and customer satisfaction had the lowest mean (M = 0.319; SD = 0.914). The standard deviation of items ranged from the highest (SD = 1.076; M = 3.59) to lowest (SD = 0.819; M = 4.17) on product quality alone.

Table 1: Reliability assessments

Constructs	Items	Scale	Mean	Std. Deviation	α Value
Perceived Price (PP)	3	PP 1.	3.63	0.991	0.865
		PP 2.	3.60	0.957	
		PP 3.	3.82	0.974	
Product Quality (PQ)	4	PQ 1.	4.17	0.819	0.896
		PQ 2.	3.59	1.076	
		PQ 3.	3.90	0.921	
		PQ 4.	3.84	0.949	
Product Assortment (PA)	4	PA 1.	4.18	0.920	0.917
		PA 2.	4.00	0.976	
		PA 3.	4.09	0.850	
		PA 4.	4.03	0.963	
Customer Satisfaction (CS)	3	CS1.	4.04	0.842	0.916
		CS2.	3.19	0.914	
		CS3.	4.06	0.829	

Table 2 below shows the descriptive statistics of the factors in the proposed research model. For perceived price, the data collected from 250 respondents ranged from 1.33 to 5, with (M = 3.68; SD = 0.86465), product quality ranged from 1.00 to 5, (M = 3.87; SD = 0.82605), product assortment ranged from 1.00 to 5, with (M = 4.07; SD = 0.83047), and customer satisfaction ranged from 1.00 to 5, with (M = 4.00; SD = 0.79854). Information on Table 2 may be relevant for the method section of a report when describing the attributes of the sample (Pallant, 2010).

Table 2: Descriptive statistics of the factors

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Price	250	1.33	5.00	3.6827	.86465	-.343	-.198
Product Quality	250	1.00	5.00	3.8730	.82605	-.441	.253
Product Assortment	250	1.00	5.00	4.0730	.83047	-.977	1.280
Customer Satisfaction	250	1.00	5.00	4.0013	.79854	-.643	.272

Table 2 shows the negative skewness values with standard error of (St. Error = .154) ranging from perceived price (-.343) with the lowest value, followed by product quality (-.441), customer satisfaction (-.643) and product assortment (-.977) had the highest value. Negative skewness values show that the scores cluster at the higher right-hand direction of a distribution

curve. Kurtosis values with standard error of (Std. Error =.307) ranged from perceived price (-.198) with the lowest value, followed by product quality (.253), customer satisfaction (.272) and product assortment (1.280) had the highest value. Positive kurtosis values show a peaked distribution where the scores cluster at the centre of the distribution curve (Pallant, 2010:57).

6.3 Linear Multiple Regression Analysis

The study examined the significance of each hypothesis in the research model. Based on linear regression analytic method, it is possible to evaluate the significance of each of the independent factor in the conceptual model and to assess the overall fit of the conceptual model to the data set (Pallant, 2010). The study tested multicollinearity using the Tolerance value and Variable Inflation Factor (VIF). The independent variables in the model did not pose any threats to the dependent variable. The study tested the ANOVA of the linear regression model. Table 3 presents the results the multiple regression for the hypotheses testing.

The first equation model tested the effects the customers' perception of price on product quality and product assortment. Customers' perception of price significantly and positively influence the evaluation of product quality and product assortment. The result is significant $p < 0.000$, with the $R = 0.913a$, which equals $(r = .9)$ and not affected by multicollinearity as recommended by Pallant (2010). This suggests that the model significantly predicts the customer perception of price on product quality and product assortment. Results show that the $R^2 = 0.834$, which indicates that 83.4% of the customers' perception of price is predicted by evaluations of product quality and product assortment in the South African food retail market.

Table 3: Results of the multiple regression for the hypotheses testing

| H	Independent Variable	Dependent Variable	Unstandardised Coefficient	Standardised Coefficient (t-values)	Collinearity Statistics		Sig	Result
					Tolerance	VIF		
H1	PP	CS	0.188	0.204(4.159)	.878	1.139	0.000	Accepted
H2	PQ	CS	0.469	0.486(9.058)	.734	1.363	0.000	Accepted
H3	PA	CS	0.184	0.192(3.441)	.681	1.468	0.001	Accepted
H4	PP	PQ	0.236	0.225(3.644)	.736	1.358	0.000	Accepted
H5	PP	PA	0.359	0.345(5.782)	.736	1.358	0.000	Accepted

* One-tailed probabilities: $P < .05$.
** One-tailed probabilities: $P < .01$.
*** One-tailed probabilities: $P < .005$.

The second equation tests the effects of perception of price, product quality, and product assortment on customer satisfaction. Perception of price, product quality and product assortment have significant positive effects on customer satisfaction. The result is significant $p < 0.000$, with the R = 0.694a, which is below (r=9) and not affected by multicollinearity as recommended by Pallant (2010). The model significantly predicts the customers' perception of price, product quality and product assortment. The findings indicate that 48.1% of customer satisfaction is influenced by perception of price, product quality and product assortment in the South African food retail market.

Table 3 shows that the perception of price has a strongest positive significant effect on product assortment, with a standardised coefficient value of 0.345, and t value of (5.782), which was significant at ($p < 0.000$). Perception of price has a weakest significant positive effect on product quality, with a standardised coefficient value of 0.225, and t value of (3.644), which was significant at ($p < 0.000$). Product quality has the strongest significant positive effect on customer satisfaction, with a standardised coefficient value of 0.486, and a t value of (9.058), which was significant ($p < 0.000$). This is followed by customer satisfaction with the perception of price, with a standardised coefficient value of 0.204, and t value of (9.058), which was significant at ($p < 0.000$). Satisfaction with product assortment had a standardised coefficient value of 0.192 and a t value of (3.441), which was significant at ($p < 0.000$). All the hypotheses in the proposed model were accepted, and confirm the significance of the proposed model in the South African food retail industry. Figure 2 shows that results of proposed model in the South African food retail industry as one of the emerging African economies.
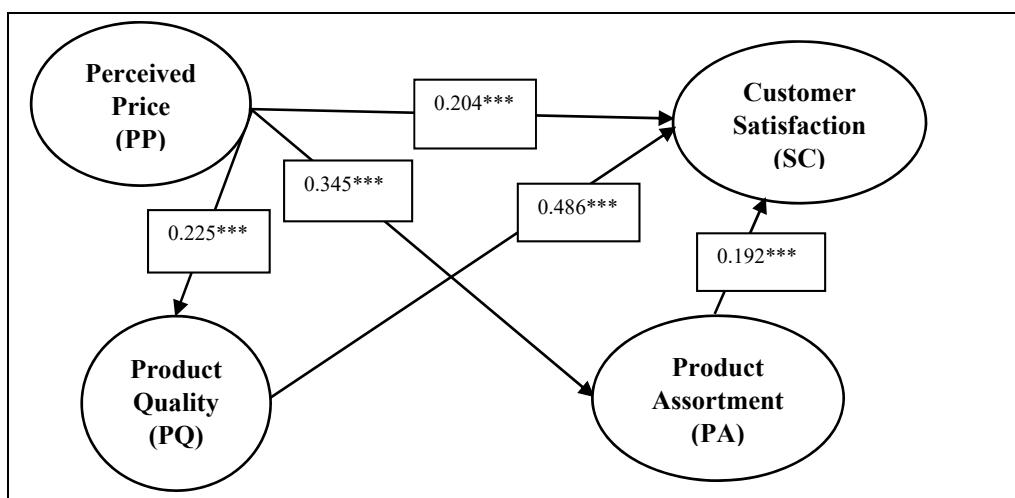
Figure 2. Results of the research framework

Source: Researcher's own model

7. Discussion

This paper contributes theoretical and empirical data on the effects of store image attributes on consumer satisfaction in the South African food retail market. This paper contributes to the customer satisfaction literature through investigation of store image attributes which are useful in improving customer satisfaction. Specifically, insights into the effects of perceived price on customers' evaluation of product assortment and product quality in the food retail industry, with the resultant impact on customer satisfaction. The findings show a strong effect of product quality on customer satisfaction, with customers' perceptions of price strongly influencing their evaluation of product assortment. Perception of price is the most sensitive attribute of the product assortment (Rudiene *et al.,* 2016).

7.1 Theoretical Implications

The paper's theoretical contribution twofold. The first contribution is that the study establishes that the customers' evaluation of store image attributes the various store attributes of product quality, perceived price and product assortment in relation to the food retail industry in South Africa improves customer satisfaction. It is appropriate to mention that various store image attributes (i.e. perceived price, product quality and product assortment), indicated in the literature to be determinants of satisfaction of customers, do have a positive significant effects on customer satisfaction in the South African food retail sector context, as hypothesised in this paper. The study found that product quality, followed by the perception of price and product assortment, had a significant positive effects on customer satisfaction. Product quality is a key attribute of customer satisfaction (Berne *et al.,* 2005:159), which not only influences consumer satisfaction but can also be used as a measure of consumer satisfaction (Mwangi *et al.,* 2019). The second contribution is that the study reveals elements that constitute customer satisfaction in food shopping. Customer satisfaction is an essential outcome in marketing and can be used in future research to examine the effects of various store attributes on consumer behaviour, such as attitudes, purchase intension or decision and/or customer loyalty.

From the theoretical perspective, the findings confirm that the items of the construct used to measure customer satisfaction and its antecedents of store attributes are valid. The proposed research model confirms the effects of store image attributes and customer satisfaction in the context of the South African food retail market. Prior research studies, (Moliner-Velazquez *et al.,* 2019; Mwangi *et al.,* 2019; Rabo & Ang, 2018) suggest that it is of paramount importance for retailers to understand the store image attributes that influence consumer behaviour. To

reach this objective, food retailers must understand the effects of the perception of price on product quality and product assortment. Customers are likely to prioritise retailers who satisfy their perception of price in relation to their evaluations of product quality and product assortment. This helps to build a store image which could differentiate the store from competitors. This is consistent with cognitive psychology theory in that customers' evaluation of product quality, price, and product assortment meet their expectations in the context of food retail stores. This implies that the consumers' levels of cognitive psychology influence their evaluations of store image attributes in term of ability to meet their expectations or needs.

7.2 Managerial Implications

The paper proposes useful managerial applications of store attributes in the food retail sector by helping retailers to understand the effects of perception of price, product quality and product assortment on customer satisfaction. To achieve this objective, food retailers must understand how customers evaluate the store attributes in relation to their satisfaction and how the consumers' perception of price influences their evaluation of quality and product assortment. This approach can be used to guide effective retail strategy based on the store image attributes that most influence customer satisfaction from a customer's perspective.

Based on the outcomes of this study, it is recommended that retailers in the South African food retail industry should focus their marketing efforts on creating a harmonious combination of store attributes that improves the customer shopping experience, as this would manifest in customer's positive evaluation of the store, satisfying their shopping needs. From the findings, it can be confirmed that South African food retailers offer customers high-quality products that satisfy their needs. The retail stores should continue to maintain their quality of food products, improve the perception of price and offer an assortment which is preferred by customers. The customers will benefit by purchasing high-quality products, with an improved perception of price, and always find products of their first choice, which enhances the customer's overall post-purchase evaluation or satisfaction. If their post-purchase experience is positive, they will develop loyalty and thereby generate revenue for the retailer (Mantrala *et al.,* 2009).

Secondly, food retailers need to improve customers' perception of price, and ensure efficient assortment planning. This will assist the customer to always obtain their first preference of product. A failure to obtain the first choice could lead to alternative choices where a customer would have a negative perception of price, which may increase dissatisfaction. Food retailers must create a perception of price that their products are affordable as consumers could be price-

sensitive. Today, consumers have developed a higher sensitivity towards price (Amanah & Harahap, 2018). This requires improving the perceptions of price based on the availability of product that competitors do not carry. To achieve this objective, food retailers must improve customer satisfaction by offering customers products of high quality. Customers are more likely to accept paying a higher price in return for higher quality.

Thirdly, customer satisfaction can be derived from offering customers a product assortment that meets their needs. Customers use the concept of available products to satisfy their needs. If their choice is not available, their decision to opt for an alternative will depend on the perception of price. Rudiene *et al.* (2016) point to the essence of offering a product assortment that is most acceptable to consumers. This will require food retailers to avoid carrying large assortments that overwhelm the customer's selection. Based on this, retailers should maintain service levels or the number of stock keeping-units (SKU) by removing low-selling items off the shelves without negatively affecting assortment perception, as recommended by Borle *et al.* (2005). To achieve this, retailers need to closely monitor their inventory using innovative technologies to ensure product availability when most needed. A consumer whose needs are limited to a minimum basket of basic goods has a little interest in the width or depth of the range, and is essentially interested in the price only. This is contrast to a consumer for whom the price of the goods is not the most important factor. This type of consumer may be interested in the width or depth of the product assortment, and its complexity (Rudiene *et al.,* 2016). It is appropriate to mention that perceived price will improve perception of product assortment more than the perception of product quality in the food retail stores in South Africa.

Finally, food retail stores need to conduct market segmentation by grouping customers based on the similarity of their needs and develop appropriate products and services that best meet these needs (i.e. targeting). Marketers need to capitalise on the growth of the South African middle class consumers who continue to develop purchasing behaviour for different products. Satisfaction occurs when the customer's prior expectation meets or equals the evaluation of the actual consumption product or service. This requires retailers to develop store images based on the most attention-compelling attributes of the store to improve customer satisfaction. The quality of products, perception of price and product assortment were confirmed as determinants of customer satisfaction in this paper. Customers' perception of price has a strong significant positive effect on customers' evaluation of product assortment, which points to improving the perception of price by carrying a product assortment that satisfies a customer's shopping needs.

8. Conclusion

The paper investigates the effects of the perception of price on product quality and product assortment and the resultant impact on customer satisfaction. The findings show that product quality is a major antecedent of customer satisfaction, followed by their satisfaction with the perceived price and product assortment in the South African food retail market. This confirms the findings of Pilarz and Kot (2019), Mwangi *et al.* (2019) and Juhl *et al.* (2002), all of which show that perception of product quality is a major antecedent of satisfaction.

The perception of price influences product assortment more than product quality. This indicates that customers evaluate the price of a product by viewing the assortment. This implies that the effect of product assortment on customer satisfaction is strongly influenced by the perception of price in the South African grocery market. In general, the results contribute to the South African food retail industry by reinforcing the need to supply superior quality products at an acceptable price, and ensuring the availability of the product in the assortment when needed. South African food retailers need insights on the effects of store image attributes on customer satisfaction. It is recommended that they adapt their strategies to the rapid changing market environment and the changes in the consumer tastes and preferences, which require them to keep updating the quality of their products, matching those with the perception of price, thereby sustaining the advantage of carrying the customer's first choice.

9. Limitations and Future research Directions

Although this paper measured store attributes relating to the perception of price, product quality and product assortment, however, it should be noted the findings cannot be generalised due to convenience sampling, and since the study only targeted Gauteng province and exclude other eight provinces of South Africa. It should be noted that customers' post-purchase behaviour or satisfaction could be influenced by various other attributes. It is important for food retailers to incorporate many attributes. The study used mall-intercept survey with disadvantages such as urban bias in term of geographic flexibility and low anonymity of respondents. Future research could use other survey methods to examine the store image attributes that influence consumer shopping behaviour, especially those factors that retailers can control, unlike those which they cannot control. Hence additional studies are needed on the effects of store image attributes on consumer behaviour. A survey should also test the mediation of these factors. It would also be of interest to compare and evaluate the perception of price, store facility, location and employee services on customer satisfaction, purchase behaviour, loyalty and customer retention.

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