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Wait, bond, and buy

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Wait, Bond, and Buy: Consumer Responses to Economic Crisis

Proefschrift

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Chapter 1

Introduction

How do economic downturns¹ influence consumers' spending behavior? And why? The common assumption among lay people and scientists is that when hit by an economic crisis, consumers downsize spending to adjust to budget constraints and save more for precautionary reasons. Although this assumption may hold at an aggregate level, a closer look at news and market reports about consumer spending patterns in tough economic times suggests that this assumption may not be correct at a more disaggregated level. On the one hand, sales figures show that consumer spending on some products increases when a crisis hits, which indicates that crisis can also lead to an urge to spend. For instance, lipstick sales rose during the Great Depression, a time in which consumers cut back on many other expenditures including cars, clothes, and houses. Similarly, economic data reveals that crises sometimes cause saving rates to drop.

On the other hand, market reports put forward that consumers spend less during economic downturns, even those whose personal financial situation is unaffected. This suggests that financial constraints are not the only cause of spending cutbacks. When we focus on the current global financial crisis, media news and market reports convey multiple consumer reactions that reflect this dual consumer response to tough economic times. Table 1.1 provides some examples of these mixed consumer reactions.

The question then arises as to whether consumers decrease their spending even if they are not financially hurt by the crisis, and if so why. Also, do consumers

¹Throughout this dissertation, the focus is on how consumers respond to bad economic times, not on the specific conditions (e.g. economic downturns or recessions, the former shorter and milder than the latter) which give birth to those bad economic times. Thus, when referring to a negative and uncertain economic environment, the terms economic crisis, downturn, and recession are used interchangeably in all the chapters.

Table 1.1: Media News About Consumer Spending in Times of Crisis

“Americans Cut Back Sharply on Spending” (The New York Times 14 January, 2008)
“Wealthy reduce buying in a blow to the recovery. The rich catch everyone else’s cutback fever” (The New York Times 16 July, 2010)
“Fall in consumer spending adds to US economic woes” (Financial Times, 2 August 2011)
“Savings rate is dropping, and experts are puzzled” (The New York Times 28 October, 2011)
“12 Things we buy in a bad economy: Donuts, nail polish, Halloween costumes, fast food, lottery tickets, generic drugs, chocolate, vegetable seeds, condoms, yoga and pets” (Time Magazine, October 19, 2011)
“Dogs Life: Owners Dont Cut Pet Spending During Tough Times” (Time Magazine, September 21, 2011)
“Hard times, but your lips look great” (The New York Times, 1 May 2008)
“In time of scrimping, fun stuff is still selling” (The New York Times, 23 Sept 2011)
“Beauty-products sales bright spot during recession” (The Seattle Times, 9 September, 2010)
“Lips, eyes and nails are hot for holiday” (NPD Research Group, 1 December, 2011)
“The British and Americans [...] spent an additional 10 per cent on upmarket cosmetics and other beauty products in the first half of the year” (Financial Times, 25 October 2011)
“Is Recession Sex Even Better Than Makeup Sex? The recession hasn’t taken any edge off the sexual-accessories trade and may well have helped” (Advertising Age, 20 May 2009)

open their wallets and show an increased willingness to pay or choose to forego savings in times of crisis? And if so, what may be the psychology behind such behavior? These are questions to which this dissertation is devoted.

Developing a deep understanding of consumer responses to economic crisis is important not only because of the recurrence of economic downturns throughout consumers’ lifetime, but also because of the important impacts that consumer reactions have on the aggregate economy. For instance, the drop in consumer spending in the US caused at least 45 major retailers and restaurant chains to declare bankruptcy in 2008 (Roche, Siverstein, Ducasse, and Charpilo 2009). That is,

spending less is likely to aggravate a crisis in the short-run. Because the spending of a consumer is related to the income of another, sharp reductions in aggregate demand may lead to a kind of paradox of thrift (Keynes 1936) or economic self-fulfilling prophecy (Katona 1975). Namely, consumers who collectively stop spending because of an assumed economic crisis that has not hurt them personally yet will increase the likelihood that the crisis materializes, which will harm them personally (Krugman 2009).

Recently studies have increasingly focused on how marketing decisions change as a function of economic conditions (e.g. Gijsenberg et al. 2009; Johansson et al. 2012; Lamey et al. 2012; Srinivasan et al. 2011; Steenkamp and Fang 2011). Moreover, prior consumer behavior and marketing research has gained insight into the behavior of segments of consumers who were financially hit by an economic crisis, that is, on those who experienced a reduction in their financial resources (Ang 2001; Ang, Leong, and Kotler 2000; Kelley and Scheewe 1975; Shama 1981; Zurawicki and Braidot 2005). Other research has looked at economizing tactics of consumers with different socio-economic characteristics (van Raaij and Eilander 1983). More recent research has also focused on understanding curtailing tactics that help consumers deal with the financial implications of an economic crisis. For instance Lamey, Deleersnyder, Steenkamp, and Dekimpe (2007; 2012) show that consumers switch to private labels in times of crisis and Deleersnyder, Dekimpe, Sarvary, and Parker (2004) suggest that the acquisition of expensive durables is postponed. Likewise, Flatters and Willmott (2009) have identified three consumer responses to the current economic downturn, including increased and agile price sensitivity, discretionary thrift even among the rich, and a demand for simplicity in products and brands. Gordon, Brett, Goldfarb, and Li (2012) also conclude that, on average, price sensitivity rises when the macroeconomy weakens but they report significant cross category variation and even procyclical price sensitivity for a few categories. In addition, Ma, Ailawadi, Gauri, and Grewal (2011) have recently examined the effect of general economic factors and gas prices on grocery shopping behavior, and conclude that the latter has a much bigger impact than the former factor.

Altogether these studies focused on explanations of consumer responses to economic downturns as influenced by external economic forces and consumers' socio-economic characteristics. Yet, economic crisis can affect consumers and thus consumer spending and saving in several ways. On the one hand, it can reduce

disposable income and/or wealth and hence shrink consumers' consumption budget and spending (Bils and Klenow 1998). On the other hand, regardless of the financial consequences, economic crises have an effect on inner psychological factors. Already in 1933, when Franklin D. Roosevelt assumed the Presidency at the depth of the Great Depression and announced in his Inaugural Address² some of his plans to respond to the Depression, he declared: "So, first of all, let me assert my firm belief that the only thing we have to fear is fear itself—nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance." That is, consumer responses to economic crises are a function of their ability to buy as well as their willingness to buy (Katona 1975).

The relationship between inner psychological factors and consumer spending and saving is amply supported by previous research in the field of economic psychology (for an overview, see Gärling, Kirchler, Lewis, and van Raaij 2010). For instance, research shows that in a period of economic upswing people are more confident and optimistic, and as a consequence, they save less and use more purchase-related financing such as mortgages and installment credit (van Raaij and Gianotten 1990). However, little is yet known about the psychology of consumer spending and saving under economic crisis, despite this being already the subject of the lead article in the inaugural issue of the *Journal of Consumer Research* (Katona 1974). As Wärneryd (1999, p.331) pointed out: "Close reading of some of Katona's works reveals many ideas that are even now applicable and testable on consumption and saving. No doubt, there is plenty of room for new, more elaborate theory that incorporates more of modern psychology." Building on this idea, Kamakura and Du (2012) have recently shown how consumer tastes, and thereby their consumption budget allocation patterns, shift as a function of economic contractions and expansions, even after controlling for the budget effect.

Thus, this dissertation focuses on investigating various aspects of the psychology of consumer spending and saving under economic crisis. In particular, it examines how economic downturns breed external uncertainty and hence affect consumer spending and saving behavior accordingly. By external uncertainty we refer to situations in which individuals think that their uncertainty is due to coincidental chance events in a world which they cannot control. That is, in times of crisis individuals have to cope with "unknown unknowns" ("we can't know enough") given the absence of reliable estimates and mixed information about

²Available online at: <http://www.archives.gov/education/lessons/fdr-inaugural/>.

prospect events. Thus, their uncertainty feelings do not relate to their individual state of knowledge. This means that in a context of external uncertainty more or better information is not a solution, and it may even further increase those feelings of uncertainty given the lack of consistent estimates.

In this sense, previous research on psychology and economics suggests that factors like uncertainty or resource availability can be connected with basic human needs and behavioral responses to bolster those needs. For instance, having witnessed the Great Depression of the 1930s in Germany, the economic psychologist Katona (1975) explained the “consumer strikes” that lead to an almost stop in spending during economic downturns from a deep-seated uncertainty about the environment that goes beyond immediate economic loss. Similarly, when analyzing the current financial crisis, Akerlof and Shiller (2009) note that confidence is the first and most crucial of our animal spirits, which leads consumers to go beyond a rational approach to decision making and act according to what they trust is true. That is, the need for certainty and security seems to be heightened and influence consumers’ spending and saving responses to economic crisis regardless of the effects of the downturn on consumers’ financial situation. Besides, psychological research suggests that an increase in the need to be connected with others is a typical reaction to the experience of resource uncertainty and threat (Baumeister and Leary 1995; Rofe 1984). Similarly, previous studies point out that female mating desire is most responsive to factors affecting resource availability and environmental harshness (Ellis et al. 2009; Lenton, Penke, Todd, and Fasolo 2011).

Building on these findings, I speculate that economic downturns may draw consumers’ attention to basic human needs and thus affect their spending and saving preferences accordingly. In particular, I propose that uncertain economic times lead to spend less and to postpone deliberate saving of spare income—‘discretionary saving,’ according to Katona’s (1975) terminology—regardless of the financial consequences of the crisis. Besides, I examine when economic downturns can lead to spend not less but more and what is the psychology behind these responses. That is, I posit that when a crisis hits consumers change their spending and saving motivations and preferences in order to satisfy the needs activated by the crisis. Thus, I argue that consumers do not always try to spend the least or save the most in times of economic crisis, and they sometimes even increase their willingness to pay or decrease their discretionary savings in the service of satisfying their heightened needs. In line with this hypothesis, recent studies

that examine the evolution of price sensitivity across business cycles and product categories conclude that, by and large, price sensitivity is countercyclical but there is significant variation across categories and a few categories exhibit procyclical price sensitivity (Gijzenberg, Van Heerde, Dekimpe, and Steenkamp 2010; Gordon, Brett, Goldfarb, and Li 2012). Moreover, Millet, Lamey and van den Bergh (2012) show that product preferences and consumption varies with business cycles due to the distinct motivational orientations triggered by economic contractions and expansions.

Overview of the Dissertation

The central theme of this dissertation is that an economic crisis activates different fundamental human needs, and that these may express themselves not only in an urge to spend less even when people are not directly hurt by the crisis, but also in a desire to spend more or postpone discretionary saving. Understanding these fundamental needs and how they might be expressed in consumer decisions may provide new insights and potentially help to spur economic development. I investigate and discuss different facets of these consumer responses to economic downturns across a variety of consumption phenomena including decision-making, product choice and willingness to pay, and a diverse set of products and decisions such as saving intentions, gamble choices, fast moving consumer goods and female fashion items. In doing so, I employed a wide range of approaches and samples; the studies varied from to more naturalistic online questionnaires conducted when the crisis was already a fact, and ranged from undergraduate student samples to household samples representative of the Dutch population. This data allows us examine disaggregate effects of economic crises on consumer spending and saving behavior, which is the focus of the thesis, by conducting cross-sectional survey analyses and examining experimental data that compares how individuals respond in times of crisis with a control group.

The chapters provide diverse perspectives on the notion that times of economic crisis may lead to decrease spending and discretionary saving, as well as to spend more, by examining the shifting links between economic downturns, basic human needs and consumer behavior. Chapter 2 addresses the linkage between economic uncertainty and consumer inaction. In contrast, Chapters 3 and 4 examine how economic downturns impact desire for social connection (Chapter 3)

and the mating desire (Chapter 4) and influence consumer choices and spending action accordingly. Although the focus throughout the chapters is primarily on the economic crisis, Chapter 2 also explores the effects of economic uncertainty derived from potential gains, striking to generalize the effects of economic uncertainty regardless of the valence of the potential outcomes. Finally, while Chapter 2 examines also how to revert consumer inaction responses to economic uncertainty, Chapters 3 and 4 emphasize how highlighting some basic human needs consumers can sometimes revert their own inaction tendency.

The rest of the dissertation is organized as follows. Chapter 2 addresses the connection between uncertainty about the future financial situation and consumer inaction behavior. Although standard theory and norms suggest that people should act (such as by searching information) to reduce uncertainty (Kohn-Berning and Jacoby 1974; Urbany, Dickson, and Wilkie 1989), they obviously cannot when the uncertainty is a property of the environment and unrelated to their knowledge, such as during an economic crisis. So what do they do then? Results from four studies provide support for the idea that under external uncertainty about the future financial situation, consumers not only rapidly stop making the larger consumption decisions, but more surprisingly also stop making discretionary saving decisions. Interestingly, they “stop” even if they are not personally hurt by the potential future losses or when the future only holds potential gains. This rapid generalized wait-and-see mode due to environmental uncertainty can be one of the causes of the deepening and prolonging of economic crisis situations, because if everyone waits-to-see, the “dust will not settle and no one sees. The findings also suggest that these effects can however be reverted when consumers are reminded about their inaction regrets.

Whereas the second chapter would suggest that in times of crisis consumers mostly stop spending due to the wait-and-see mode, Chapters 3 and 4 examine if and how this can be broken. In particular, Chapter 3 analyses whether the need for social connection is one route to increase consumer spending when a crisis hits. From an evolutionary perspective the need for connectedness is linked with self-preservation as social groups confer protection and survival benefits to their members (Buss and Kenrick 1998). That is, if in times of economic crisis consumers’ need to connect increases, then brands, products and advertising that cater to this need should be preferred and could even increase consumers’ willingness to pay. The results from a survey and three controlled studies, using advertisements and packages as stimuli, provide support for this hypothesis.

Chapter 4 examines if female sexy clothing is also a route to increase women's spending when a crisis hits. In this chapter we narrow our research focus to women given that gender differences arise in the behavioral strategies employed by men and women when attracting a mate (Buss 1988). In particular, research on evolutionary psychology shows that intra-female competition for a mate becomes especially strong when possession of resources varies greatly among males (Dawkins 1986; Turke and Betzig 1985; Viming 1986). Thus, in an explorative survey we investigated this link between economic downturns and women's mating desire. The findings suggest that indeed in times of economic crisis women's desire to attract a mate increases. Interestingly, previous research has shown that when women perceive such an intensified female-female competition for a mate, physical attractiveness is the dimension on which competition focuses (Buss and Dedden 1990; Fisher 2004). Then, there is reason to believe that female competition for access to a mate can have an active role in women's preferences and value for sexy clothing during economic downturns. The findings of three controlled studies suggest that indeed in times of economic crisis female sexy clothing that enhances chances to mate are preferred and even increase their willingness to pay.

The collection of chapters in this dissertation draws on multiple literatures such as uncertainty theory, regret theory, behavioral decision-making, and research on affective and social influences. An important premise of these chapters is that in order to account for the influence of economic crises on consumption and saving academic inquiry must go beyond the economic sensitivity principle and explore the psychological principles of economic downturns. Collectively, the chapters of this dissertation shed new light on the versatility of consumer responses to economic downturns. In particular, our findings suggest that external uncertainty about the financial situation heightens multiple needs, which then shape consumer responses to economic crises. In line with this reasoning, previous research on human motivation ("self-determination theory," Deci and Ryan 2008) posits that there is a set of basic and universal needs (autonomy, competence and relatedness), which are thwarted or satisfied. And it is not the relative importance of each of them but whether they are thwarted or satisfied what helps understand how the environment affects motivation, behavior and affect. In this instance, the dominant consumer response when a crisis hits may be a function of what need-bolstering opportunities a consumer has at the moment. In this sense, we narrow the focus of our research to one need-boosting opportunity at a time and focus on

understanding which basic needs are affected in times of crises and how each of them shapes consumer behavior.

Taken together, the findings reported in the following chapters suggest that the “less spending, more saving” principle may not be a generalized rule or have important exceptions when a crisis hits. The closing chapter (Chapter 5) complements and extends the previous chapters by providing general conclusions and exploring the implications of the different studies. In addition, it offers avenues for future research to further examine the versatility of consumer responses in times of crisis as well as to explore what determines which of the different motivations drives consumer behavior in a recession.

Chapter 2

Wait-And-See: How Feelings of Economic Uncertainty Block Consumer Decisions

Abstract: Feelings of uncontrollable uncertainty about the future financial situation elicit a wait-and-see mode and thus lead to inaction. This blocks not only consumers' major spending decisions, but also and surprisingly their discretionary saving decisions, even if potential economic losses do not harm them personally or only involve prospective gains for them. Inaction serves to reduce future regret about current action and to retain flexibility in the face of an uncertain future, but may actually lead to losing opportunities to earn money. Therefore, focusing consumers on the future regrets of current inaction is a remedial strategy.

What do people do when they cannot readily reduce their feelings of uncertainty regarding economic outcomes, such as when the outcomes of a lottery only become known in the future, or when uncertainty concerns the state of the general economy? Do they ignore this uncertainty and continue with their business or will they try to reduce it? There is evidence from economic research that firms operating in an uncertain environment abruptly hold-off investment decisions and switch to a wait-and-see mode (Bloom 2009). They appear to stop-and-wait until the dust of uncertainty settles rather than act-and-continue with their business. Consumers seem to react in a similar fashion (Krugman 2009; Roche, Ducasse, Liao, and Greveler 2010). To illustrate, during the recent global economic downturn, even the Top 5 percent income earners became jittery and stopped spending on luxury goods.¹

We propose that the wait-and-see response to an uncertain economic context is actually psychologically broader and more fundamental and leads to “less action” in general. As noted earlier, environmental uncertainty is thought to occur when individuals face unknown unknowns (we can’t know enough) given the absence of reliable estimates and mixed information about prospect events (Kahneman and Tversky 1982). That is, when the appraisals of the economic outlook lead individuals to perceive the context as a negative threat and as something that they cannot control, such as in times of crisis, feelings of external uncertainty will arise. In particular, given the perceived unpredictability of the environment, such high levels of state uncertainty are likely to be linked to uncertainty about the personal impact of the environmental effects as well as to the inability to predict the likely consequences of a response choice (Milliken 1987).

In such instances of environmental uncertainty, we propose that consumers respond not only with less spending, but also with fewer actions to save. By actions to save we do not refer to refraining from spending current income on consumption (Keynes 1930), but to a purposeful decision to deposit and commit financial resources in banks or other financial institutions, even when no risk is involved (often called discretionary saving; Katona 1975; van Raaij and Gianotten 1989). That is, we argue that uncertainty about the future financial situation prompts people to not only hold off active decisions to spend but also decisions to deliberately save spare income and commit resources, even if the uncertainty entails no potential losses and even if it holds only prospective gains in stock.

¹www.nytimes.com/2010/07/17/business/economy/17consumers.html, last accessed February 2011.

That is, we speculate that under uncertainty about the future financial situation people therefore wait across the board aiming at avoiding mistakes, keeping current options open or even to avoid commitments. If this were true, restoring a forward-looking perspective by focusing people on the potential future regret of current inaction should release the blocking effects of uncertainty. The present research tests this idea.

Prior consumer behavior and marketing research has gained insight into specific coping responses to economic downturns, such as buying private labels, seeking price promotions and decreasing expenditures of specific product categories (Estelami, Lehmann, and Holden 2001; Hanna, Kizilbash, and Smart 1975; van Raaij and Eilander 1983; Kamakura and Du 2012). For instance, studies that examine non-discretionary purchases, such as groceries, show that consumers switch to private labels (e.g. Lamey et al. 2007, 2012). However, when consumer purchasing decisions refer to durables, previous research already shows that consumers can and do wait until the economic conditions improve to make their purchase decisions (Deleersnyder et al., 2004). In addition, prior research has examined the segments of consumers who were financially hit by an economic crisis (Ang 2001; Ang, Leong, and Kotler 2000; Kelley and Scheewe 1975; Shama 1981; Zurawicki and Braidot 2005). In addition, a large literature in economics identifies the influence of uncertainty shocks on aggregate demand by firms (Bloom 2009), earnings uncertainty on consumer demand for durables (Bertola, Guiso, and Pistaferri 2005) and provides historical case analyses of recessions (Romer 1992). Yet, we are not aware of prior research on the wait-and-see mode and its fundamental implications for consumer decisions that can be postponed until the economy improves. This motivated the present study.

Wait-and-See

People experience uncertainty when either the valence of the outcomes of an event or the probabilities that they occur or both are unknown. It differs from risk, which is the known probability of outcomes. Experiencing uncertainty is an aversive emotional state that people try to avoid. When people feel uncertain about the features of an important product or about their future preferences, they tend to act to reduce uncertainty in order to make informed decisions. They actively search for external information to reduce uncertainty about products (Kohn-Berning and

Jacoby 1974; Urbany, Dickson, and Wilkie 1989) or engage in variety seeking to hedge against uncertainty about their preferences (Simonson 1990) and are willing to pay extra for this (Eliaz and Schotter 2007).

Yet, when the basis of uncertainty is not internal (personal) but external (environmental) and thus out of one's control (Kahneman and Tversky 1982), active information search is not conducive to uncertainty reduction. In fact, recent research with fMRI scans have actually shown that there is a common cerebral correlate for internal and external attributions of uncertain predictions but different correlates for coping strategies of uncertainty (Volz, Schubotz, von Cramon, 2004). Previous research streams on uncontrollable uncertainties, such as mortality threats or self-threats, have shown that one way consumers react when they cannot reduce their uncertainty feelings is by increasing their spending and indulging (Ferraro, Shiv, and Bettman 2005; Gao, Wheeler, and Shiv 2009; Kasser and Sheldon 2000). However, previous research show that different types of threats lead consumers to seek very different forms of coping responses (Rindfleisch, Burroughs, and Wong 2009). In this sense, the types of threat elicited by mortality cues or self-threats versus economic crises differ in their scope as well as in their permanence. In particular, economic crises are likely to represent a temporary threat, whereas mortality or identity threat cues elicit a terminal or permanent threat. Moreover, economic downturns represent a resource scarcity or competition threat, while mortality or identity cues correspond to a personal threat. Thus, we posit that findings of previous research about the role of external uncertainty feelings on consumer judgments may not generalize to uncertainty related to the economic environment.

In fact, spending actions and discretionary saving represent commitment and giving up control over financial resources and hence they are likely to further increase consumers' feelings of uncertainty rather than help them repair in times of crisis. Thus, we propose that increased uncertainty about the economic situation brings people in a fundamental inaction mode. That is, we propose that external economic uncertainty induces a tendency to refrain from action, to wait-and-see, irrespective of the valence of the uncertain outcomes.

An important remaining question, however, is how this proposition can be reconciled with observations that consumers do reconsider their choices and change their grocery purchase behavior in times of crisis, for instance switching to cheaper private label alternatives (Lamey et al. 2007, 2012). We posit that these two effects are compatible and even convergent with previous research. Prior studies

that show how consumers switch to private labels examine mainly grocery categories to study these effects. That is, they analyze consumers' shopping behavior regarding every day necessities or purchases that cannot really be postponed until the economy recovers. However, this is not the case for all consumer purchasing decisions, such as durables. In this sense, previous research already shows that consumers can and do wait until the economic conditions improve to purchase durables (Deleersnyder et al., 2004). That is, for decisions that involve every day necessities or decisions that cannot really be postponed until the economy improves, the "wait and see" effect cannot be applied. Thus, in such instances it seems reasonable to speculate that consumers actively seek information and switch to make the most of their budget in times of crisis.

Why would uncontrollable uncertainty about the financial situation prompt inaction? One possible reason for consumers to opt to "wait and see" and block their decisions is to avoid feelings of future regret. The financial decisions consumers take (or avoid) during uncertain economic times can have positive or negative consequences that consumers may get to know when the uncertainty dilutes. In that regard, consumers expect greater regret for experiencing bad outcomes due to action than inaction (Gilovich and Medvec 1995). Regret depends on being held responsible for bad outcomes, and actions tend to be seen as more personally causal than inactions (Zeelenberg and Pieters 2007). Thus, inaction is a likely self-defensive response to external economic uncertainty. Another related reason is that action represents commitment and inaction gives people flexibility to act when future opportunities arise (Dhar 1997) and the dust of uncertainty has settled. This proposition has not been examined yet, although observations and evidence on related phenomena are consistent with it. More generally, Anderson (2003) in a review of the literature concludes that: "Decision avoidance deserves concentrated attention, yet it has not been studied in an integrated manner because it does not fit neatly into the current paradigms in clinical, cognitive, or social psychology." Still, economic psychologist Katona (1975, 142) already noted that: "during a recession, as well as during an inflation, most people, irrespective of whether or not they are directly affected, have a sense of reduced certainty and reduced security and hence spend less." Yang, Burns, and Backhouse (2004) have argued that in organizations, deliberate inaction is even a common strategy to manage uncertainty ("Let's deal with that next year"). Lipshitz and Strauss (1997, p. 150) go as far as to suggest that inaction is at the core of the uncertainty construct, defining it "a sense of doubt that blocks or delays action."

Ritov and Baron (1990) indeed found empirical evidence that people were reluctant to have their children vaccinated, even when the chances of a bad outcome were significantly higher if no vaccine was administered. Such omission (inaction) is often favored over commission (action) when either one might cause harm, as in case of risky vaccination. Chernev (2004) found, among others, that prevention-oriented people were more inclined to keep their original choice for a digital camera than promotion-oriented people were, expressing a form of status quo preference by inaction. Dhar (1997) showed that uncertainty about one's preferences for involving products such as cameras and laptops led to choice deferral (inaction) when no option had a decisive advantage. Then information search would not help to reduce the uncertainty. Although these phenomena differ in their details, they all reflect a common, fundamental inaction tendency.

Is there then a way to revert this inaction focus? We posit that strategies that induce a forward-looking perspective may be remedial and undo the blocking effects of uncertainty. That is, consumers who imagine experiencing negative emotions in the future because of their present inaction might be spurred into action. Zeelenberg and Pieters (2007) review evidence that focusing consumers' attention to the future regret of current choices may change these choices. In line with this reasoning, Baumgartner, Pieters, and Bagozzi (2008) found that consumers' general anticipated emotions of action and inaction increased their intentions to act to averting the possible harm done in the Y2K (year 2000) change, over and above people's current emotions and their likelihood estimates. This suggests that focusing consumers on the future regret of current inaction may assist them in crossing the barriers of the wait-and-see mode.

Overview of Studies

In sum, we predict that external economic uncertainty induces an inaction tendency in people. As a consequence, people suspend not only their major spending decisions, but also (and surprisingly) their saving decisions, even if the potential economic losses do not harm them personally or only involve prospective gains for them. This inaction tendency or wait-and-see mode transfers to unrelated tasks. Yet, focusing consumers on the future regrets of current inaction is a potential remedial strategy.

We conducted four studies to test these predictions. Study 1 used correlational data from a representative survey of regular consumers ($N = 979$) to explore the

relationship between feelings of uncertainty and intentions to wait-and-see during an economic downturn. Study 2 tested in an experimental setting the idea that economic uncertainty induces inaction for spending and discretionary saving, even when the uncertainty entails no losses. Study 3 examined whether uncertainty elicits inaction in case of prospective gains (Studies 3a and 3b) and tested whether it is indeed uncertainty rather than negative outcomes that accounts for the effects (Study 3b). Study 3 used choices between actual gambles for money to assess the behavioral effects of economic uncertainty. Study 4 tested whether prospective regret of inaction can remedy the blocking effects of uncertainty.

We hope that these studies will reveal how external economic uncertainty blocks action across a broad spectrum. People seem not only to spend less but also to take less saving decisions, thus being left with more uncommitted financial resources. Hence, uncertain economic contexts induce inaction and therefore people may miss out on important opportunities to gain.

Study 1: Postpone and Save Intentions

We gained access to data from two different waves (September 2009 and March 2010) of a representative survey about consumer decisions and the economy. Given the rotation sampling design of the survey, there was a partial sample overlap in both waves. This enables an exploration of the relationships between socio-economic variables, cognitive appraisals about the economy and the personal financial situation (measured with the items of the Index of Consumer Sentiment) and uncertainty feelings regarding the future financial situation (all measured in September 2009), and reported spending and saving behavior (measured in March 2010). This index of consumer sentiment (ICS) is a widely used measure to assess economic confidence and predict future consumption (Ludvigson 2004). We use the measure to explore the potential influence that uncertainty feelings have over and above cognitive appraisals of the personal and economic situation that are in common use. Evidence for uncertainty feelings indeed having this influence would add further support to the role of feelings in economic decisions (Loewenstein, Weber, Hsee, and Welch 2001) and that it is worthwhile to focus on uncertainty feelings.

Method

The original surveys were conducted in September 2009 and March 2010 among members of the CentER-Data Internet panel of Tilburg University, the Netherlands. The panel is representative for the adult population in the country on gender, age, and income. We selected for the analysis the sample that participated in both waves ($N = 979$). In particular, we had information about consumer sentiment (ICS, 4 items), feelings of uncertainty (2 items), perceived unemployment risk (2 items) and socio-demographic variables, gender (54% female), age ($M = 52$, $SD = 17$), number of household members ($M = 2.62$, $SD = 1.27$), and personal net monthly income ($M = \text{€}1468$, $SD = 3770$), as control variables, all measured in September 2009. The four ICS items were, respectively: “How do you see the development of the general economic situation in the country? Do you think that over the past 12 months, things have become better or worse, or stayed the same?” (ICS-1, $M = 2.04$, $SD = .83$), “And what do think about the coming twelve months? Will the general economic situation in the country become better, worse or stay the same?” (ICS-2, $M = 2.54$, $SD = 1.04$); “Has the financial situation of your household become better or worse over the past 12 months?” (ICS-3, $M = 2.69$, $SD = .83$); “How do you think the financial situation of your household will develop over the coming 12 months?” (ICS-4, $M = 2.73$, $SD = .84$), measured on 5-point “clearly worse/clearly better” scales. The two uncertainty items were: “When I imagine how the financial situation of my household will be for the coming 12 months, I feel certain [uncertain]” measured on 7-point “not at all/exceptionally” scales. After reverse coding the positively worded item, the item scores were averaged to form an overall uncertainty measure ($\alpha = .64$, $M = 3.46$, $SD = 1.18$). Unemployment risk was measured with two items: “What chance do you think there is that you might lose your job over the coming twelve months?” ($M = 15.82$, $SD = 24.14$); “What chance do you think there is that your partner might lose his or her job over the coming twelve months?” ($M = 15.84$, $SD = 22.75$) both measured on a 0-100 scale. To account for the effect that individual unemployment risk is driven not only by the personal unemployment risk but also by the partner’s unemployment risk, when participants had a partner we computed a “household unemployment risk” measure taking the highest risk among both items. Finally, in the survey of March 2010 spending and saving behavior over the last six months were assessed with: “Compared to what I did before, in the last six months I postponed purchases or waited for some time first”

($M = 3.84$, $SD = 1.37$) and “Compared to what I did before, in the last six months I saved money at a financial institution” ($M = 3.42$, $SD = 1.29$), with a 7-point “much less/much more” response scale.

Results and Discussion

An ordered logit analysis was performed with the two reported behaviors as dependent variables and the four socio-demographics, unemployment risk and uncertainty feelings as independent variables. The results are in Table 2.1. In addition, we conducted a separate analysis to examine the influence of economic appraisals on consumers’ spending and saving behavior. The results are in Table 2.2.

As expected, uncertainty feelings significantly predicted consumer decisions regarding postponement of purchases and saving at financial institutions, independent of the influence of socio-demographic variables. Increased uncertainty was associated with higher postponement of purchases ($\beta = .265$, $t = 3.84$, $p < .001$) and lower decisions to save at financial institutions than normally ($\beta = -.463$, $t = -6.80$, $p < .001$). Regarding the effect of cognitive appraisals on consumer responses, both purchase postponement and saving behavior were significantly associated with appraisals about the past evolution of the financial situation in the household² (postponement: $\beta = -.317$, $t = -2.69$, $p = .007$; saving: $\beta = .654$, $t = 5.69$, $p < .001$), while controlling for the other variables.

These results provide initial evidence, from a representative sample of regular consumers, that uncertainty about the economy induces a general inaction mode as expressed in increased tendency to postpone major purchases and decreased tendency to actively save. Of course, the observed relationships between uncertainty feelings and decisions are correlational, despite their theoretical foundation and our statistical control for socio-demographic variables and cognitive appraisals of the economy that might influence them (Rindfleisch, Malter, Ganesan, and Moorman 2008). Also, the survey concerned general decisions to spend and save, and could not disentangle money allocation to spending, active money saving, or passive money holding. Therefore, in Study 2 we tested in a controlled experimental setting whether economic uncertainty prompts inaction and that consumers put

²If cognitive appraisals are averaged to form a consumer confidence index, the results suggest that the index significantly predicts spending and saving behavior. Yet, our findings show that not all cognitive appraisals have the same effect on spending and saving behavior. Thus, we focus on the separate ICS item for the analysis.

Table 2.1: Postponement and Saving Decisions (Study 1)

	Decisions to postpone large purchases			Decisions to save at financial institutions		
	β	t	p	β	t	p
Control variables:						
Gender	-.035	2.17	.833	-.018	.11	.914
Age	-.020	-3.31	.001	-.021	-3.46	.001
Monthly income (log)	.127	-1.24	.326	.214	1.61	.108
Household members	.151	2.40	.016	.015	.69	.806
Uncertainty feelings	.265	3.84	<.001	-.463	-6.80	<.001
Unemployment risk	.007	2.09	.038	.002	.87	.389

Note. $N = 619$; Gender: 1 = female, 0 = male; $R^2 = .026$ for postpone, and .142 for save, both significant at $p < .001$.

Table 2.2: Postponement and Saving Decisions (Study 1)

	Decisions to postpone large purchases			Decisions to save at financial institutions		
	β	t	p	β	t	p
Control variables:						
Gender	-.113	-0.65	.515	.068	.39	.693
Age	-.027	-4.03	.000	-.012	-1.94	.052
Monthly income	.115	.81	.415	.266	1.83	.067
Household members	.119	1.83	.066	.059	.89	.371
ICS-1	-.118	-1.19	.235	.033	.33	.743
ICS-2	-.047	-.52	.601	.148	1.63	.103
ICS-3	-.317	-2.69	.007	.654	5.69	.000
ICS-4	-.150	-1.27	.204	.029	.26	.797
Unemployment risk	.006	1.76	.078	.002	.66	.506

Note. $N = 584$; Gender: 1 = female, 0 = male; $R^2 = .031$ for postpone, and .042 for save, both significant at $p < .001$. An F test rejects the null hypothesis of equality of coefficients for the ICS items. Thus, we include the items separately instead of an ICS Index.

both their active spending and their active saving on hold even when the uncertainty objectively does not harm one's personal situation.

Study 2: Money Allocation

Method

Seventy-five volunteer undergraduate students from an introductory marketing course were randomly assigned to one of three experimental conditions (crisis

with or without personal harm, and control condition). Participants in the two crisis conditions read the following scenario (no personal harm condition between brackets): “Imagine that the economy is in a recession, and [but] you know with certainty that your household is somehow [is not and will not be] negatively affected by the crisis. You have €4500 accumulated in your checking account”. Participants in the control condition just read “you have €4500 accumulated in your checking account.”

Then, participants indicated how they would allocate the €4500 among three categories: 1) “keep money in the checking account”; 2) “use money to buy functional or indulging products (such as a laptop, appliances, clothes and accessories), as well as to do useful or pleasurable things (such as a language course or going to the movies or travel)”; 3) “save money and place it in a new account, which has 1/3 probability of providing 1% higher interest rate than the checking account”. Finally, they indicated their cognitive appraisals of the economic situation using the four consumer sentiment items of Study 1 (Katona 1975), and their feelings of uncertainty (measured on a 9-point “certain/uncertain” scale). In addition to using the overall cognitive appraisal measure, we examined the individual items for more detail.

Results and Discussion

ANOVAs revealed that cognitive appraisals of the economy and uncertainty feelings differed between conditions in the predicted pattern. Overall appraisal (ICS) was least positive in the “crisis with personal harm” condition ($M = 2.06$), followed by the “crisis without personal harm” ($M = 2.72$) and finally by the control condition ($M = 2.95$, all significantly different from each other at $p < .05$). A closer look showed that, as expected, appraisals of the general economy were more negative in both crisis conditions than in the control condition, but appraisals of the personal financial situation were more negative in the “crisis with personal harm” condition than in the other two conditions. Uncertainty feelings expressed the same pattern as the appraisals of the general economy, being higher in the two crisis conditions (M with harm = 6.16, M without harm = 5.76) than in the control condition ($M = 2.60$) (Table 2.3).

We predicted that economic uncertainty would induce inaction, regardless of the consequences of the crisis for individuals’ personal situation. The results of

Table 2.3: Money Allocation to Spending, Saving, and Keeping Under Economic Uncertainty (Study 2)

	Control Condition	Crisis		$F(2,72)$	p	η^2
		With Personal Harm	Without Personal Harm			
Appraisals and Uncertainty:						
Uncertainty	2.60 ^a	6.16 ^b	5.76 ^b	51.12	< .001	0.55
ICS	2.95 ^a	2.06 ^b	2.72 ^c	36.76	< .001	0.51
ICS-1	2.52 ^a	1.76 ^b	1.88 ^b	6.61	.003	0.16
ICS-2	2.76 ^a	2.04 ^b	2.16 ^b	5.97	.004	0.15
ICS-3	3.16 ^a	2.16 ^b	3.36 ^a	12.30	< .001	0.26
ICS-4	3.36 ^a	2.28 ^b	3.44 ^a	21.61	< .001	0.37
Money Allocation:						
Spend	€2256 ^a	€1032 ^b	€1524 ^c	15.65	< .001	0.30
Save in new account	€2016 ^a	€1208 ^b	€1122 ^b	5.17	.008	0.13
Keep in current account	€228 ^a	€2260 ^b	€1854 ^b	27.31	< .001	0.41

Note. ICS-1-4 on 5-point scales from (1) much worse to (5) much better. Uncertainty on 9-point scale from (1) certain to (9) uncertain. ICS is mean of four items. Means with different superscripts differ significantly at $p < .05$.

ANOVAs supported this. Participants in the control condition allocated significantly more money to active spending ($M = €2256$) and to active saving ($M = €2016$) than participants in the two crisis conditions did, and as a consequence they (passively) kept significantly less money in their current account ($M = €228$). The two crisis conditions allocated the same high amount to active saving (respectively, M with harm = €1208, and M without harm = €1122) and kept the same even higher, amount in their current account (respectively, M with harm = €2260, and M without harm = €1854). Participants in the “crisis without personal harm” condition allocated more money to active spending ($M = €1524$) than participants in the “crisis with personal harm” condition did ($M = €1072$), although still less than participants in the control condition ($M = €2256$). Although unexpected, this finding is consistent with the idea that participants in the “crisis without personal harm” rightfully judged their personal financial situation less threatened by the economic downturn than participants in the other crisis condition.

The results support the idea that uncertain situations, such as when the economy is in a downturn, prompt consumers to stop actively spending and actively saving, and instead retain more of their resources flexible, regardless of whether the crisis is expected to hurt them personally or not. Yet, although the pattern

of results across the initial survey and the current experiment is consistent and strong, we cannot rule out that the effects are actually driven by people's negative feelings (Lerner and Keltner 2000) rather than by uncertainty, and that the general negativity of being in an economic crisis situation accounts for the effects. This account is not very likely given the significant difference in spending between the two crisis conditions, but more definite evidence is needed. Also, Study 2 relied on self-reports of money allocation, which might be prone to socially desirable responding. Study 3 addressed these issues. In addition, it allowed us to establish generalizability of the effects across other manipulations and measures.

Study 3: Choice Between Gambles

Having shown the relationship between feelings of economic uncertainty and individuals lower intentions to spend and save, in this study we seek to provide support for the idea that general tendency to "wait and see" and hence avoid action underlies individuals preferences for spending and actively saving less in times of economic crisis. One way to do so is to assess inaction is using choices between real gambles for money in the classic economic "three-door task," also known as the "Monty Hall problem," named after the game show host who used it (Friedman 1998; Gilovich, Medvec, and Chen 1995). The rules of this game are as follows: each participant is given the choice of three boxes. Behind one box there is a prize; behind the others, a worse prize or no prize at all. After the participant has chosen a box, the game host, who knows what is behind each box, opens one of the two remaining boxes, and the box he opens must have one of the worse prizes or no prize at all behind it. If both remaining boxes have the worse prizes behind them, he chooses one randomly. After the box with no/worse prize is open, the participant is asked to decide whether he wants to stay with his first choice or to switch to the last remaining box. Thus, we chose this three-doors task because it gives participants a straightforward choice between action (commission -change the initial choice) and inaction (omission -remain with the initial choice) with real financial consequences, and thus test the inaction effects of economic uncertainty.

Previous research has found that most people's intuitions tell them to stick to their original choice (Friedman 1998; Gilovich, Medvec, and Chen 1995). Nevertheless, given that participants in this study were students in an introductory

statistics course, they should be less inclined to do so. More importantly, we predicted that if economic uncertainty leads to a greater preference for postponing spending and saving decisions because of an increased tendency to “wait and see”, then we should find that individuals with feelings of economic uncertainty have a greater tendency to stick to their original choice in this game than participants in the control condition. To test this hypothesis, two separate samples were recruited and the relationship between their economic uncertainty feelings and their inaction tendency was analyzed. Study 3a tests if uncertainty about the general economy induces inaction. Study 3b tests if uncertainty feelings about potential-unknown-gains in a gamble also prompt inaction. The additional goal of Study 3b is to demonstrate that feelings of economic uncertainty will lead to a “wait and see” mode even in positive contexts (such as in a lottery), and are thus not related to the potential negative outcomes attached to an economic crisis but to the uncontrollable uncertainty itself.

Study 3a

Method

Eighty volunteer undergraduate students in an introductory statistics course were randomly assigned to one of two experimental conditions (economic crisis and control condition), and participated individually.

Upon arrival, participants were informed that they would participate in several unrelated studies consisting of paper-and-pencil tasks. The first task was presented as a study on the evaluation of print media content (but was actually the crisis-induction procedure). Participants in the crisis condition were asked to read a (purported) news item about the crisis and to judge from which newspaper it came: “Negative reports of the IMF: Recession far from over. The world is in a deep recession. The government pumps billions into the market and tightens the supervision of the financial sector in response to the economic crisis. Yet the effects are hardly noticeable. The country is in a severe recession. The pace of the economic downturn in the country is unprecedented. The International Monetary Fund (IMF) predicts that the national economy is shrinking more than ever. The economic contraction, according to recent IMF reports will reach 5.2% this year and 7.4% in the next year.” Participants in the control group read a news item on the distribution of small and large raindrops. Participants indicated from which of several newspapers they thought the news item came. They also

indicated their feelings of uncertainty (certain/uncertain) and the valence of their feelings (sad/happy) on 9-point scales.

Next, participants engaged in the “three-door task.” Participants were informed to receive a prize of either €3 or €5 for participating in the study, depending on the choice they would make in the three-door choice task. The prize money was located in three boxes (two with €3 and one with €5). First, participants chose one of the three boxes, without opening it yet. Then, the experimenter (who knew what was in each box) opened one of the two boxes that the participant did not choose and revealed a €3 prize. Next, the experimenter offered participants the opportunity to switch from the originally-chosen-but-still-unopened box to the other remaining box. After participants had made their choice to keep the original box or switch to the other one, the two remaining boxes were opened and participants received their prize. Switching is rational because it increases the likelihood of winning the €5 prize from the initial 1/3 to 2/3 after the experimenter has opened one of the two non- chosen boxes.

Results and Discussion

No participant indicated prior knowledge of the three-door task, even at the exit interview after final payment, thus all participants were included in the analysis. The two conditions did not differ in the overall valence of their feelings (M crisis = 6.65, M control = 6.78, $F < 1$, $p > .05$), which rules out a valence-based account of the results. However and as expected, uncertainty was significantly higher in the crisis condition ($M = 6.3$) than in the control condition ($M = 2.3$, $F(1, 78) = 294.34$, $p < .001$). A logit regression analysis showed that the probability of switching to the other box was lower in the economic crisis condition (1 out of 40) than in the control condition (12 out of 40; logit regression weight = -2.82, $z(80) = -2.63$, $p = .008$).

This shows that uncertainty, and not the experienced negativity of the situation, prompts inaction in consequential choice tasks, even if the uncertainty entails only absolute gains (€3 or €5) rather than losses. It reveals that the tendency to wait-and-see may actually lead to missing opportunities to improve one’s lot. In Study 3b we aimed to corroborate these findings and generalize them to other external conditions that elicit uncertainty. It also allowed us to establish more firmly that uncertainty rather than negativity of the situation activates the inaction mode.

Study 3b

Method

Eighty-eight volunteer undergraduate students in an introductory statistics course were randomly assigned to one of three experimental conditions (uncertainty of winning, certainty of not winning, and control).

Participants in the experimental conditions read a won gamble scenario or an uncertain gamble scenario (adapted from Tversky and Shafir 1992): “Imagine that you have just played a game of chance that gave you more than 50% chance of winning €5. Imagine that the dice has already been cast, and you have not won the €5 [but that you will not know whether you have won until you make your decision concerning a second gamble]. You now have the chance to make your choice for the second gamble.” Next, as in study 3a, participants engaged in the “three door task.” Participants in the control condition did not read a scenario. Uncertainty and mood were measured (9-point “certain/uncertain,” “sad/happy”).

Results and Discussion

Again, no participant indicated prior knowledge of the three-door task, even at the exit interview after final payment. The three conditions did not differ in the overall valence of their feelings (M result unknown = 6.70, M certain not win = 6.97, M control = 6.78, $F < 1$, $p > .05$), as in Study 3a. Yet, as predicted, uncertainty was significantly higher in the “result unknown” condition ($M = 6.27$) than in the “certain not win” and control conditions (M certain not win = 2.72, M control = 2.30, $F(2, 85) = 127.06$, $p < .001$). In support of the predictions, a logit regression analysis showed that the probability of switching was lower in the “result unknown” condition (1 out of 30) than in the control condition (7 out of 30) and “certain not win” condition (7 out of 28) who did not differ from each other (“result unknown” versus other two conditions = -2.22, $z(88) = -2.09$, $p = .036$).

These results provide additional evidence that uncertainty feelings induce inaction, even if the outcomes only concern potential gains. They show that uncertainty, and not negative affect, accounts for the effects. The finding that uncertainty in one task (media evaluation, Study 3a, or the first gamble, Study 3b) transfers to an unrelated choice task with real monetary consequences shows the scope of the effect.

Study 4: Unblocking Inaction

The first three studies provided evidence that external uncertainty induces an inaction mode—the tendency to wait-and-see—even if the uncertainty entails just gains and no losses. Although it is sometimes advantageous to wait until the dust has settled, Study 3 showed that inaction might result in losing opportunities to gain. This phenomenon is broader. In times of economic downturns, prices of durables and luxury goods and services, such as homes, Caribbean cruises, and package holidays, often decrease or rise less than usual. This provides opportunities for consumers who are not financially hit by the downturn to forward buy, stock-up, indulge or purchase items that are generally outside of their budgets. In this context, Study 4 tested a potential remedial strategy to restore people’s forward-looking perspective and prompt them to act again, namely by activating the future regrets of current action versus inaction.

Method

One hundred and four paid undergraduate students were assigned to a condition of a three-group design (anticipated regret of action, anticipated regret of inaction, control). Building on Study 3a, uncertainty and anticipated regret were activated by means of two separate “news identification” tasks in which participants judged to which media certain news items belonged. Each regret condition contained a news item about the economic crisis and a separate news item about future regrets of action (or inaction). Participants in the control group only read the news item on the economic crisis, which was the same as in Study 3a. The text in the future regrets item did not refer to the current economic situation but was more general (inaction condition between brackets): “Consumers should try to avoid future frustration that is due to their present behavior. That is, consumers should always try to think how regretful they would feel in the future about decisions taken [not taken] today or about things done [not done] today.” Participants identified to which newspaper the item most likely belonged. Next and similar to Study 2, participants engaged in a task presented as a money allocation study. They were asked to allocate an amount of €4000 that they had allocated in their current account, now simply to spending versus saving. The key measure was the amount of money allocated to spending. Finally, participants indicated the focus of their current own regret feelings (dichotomous item, “When I think about my

recent regrets I feel: (1) regret as a result of something I failed to do, (2) regret as a result of something I did”) and appraised the general economy (“How do you perceive the development of the general economic situation in the country?” 5-point scale clearly got worse/clearly got better). Participants showed no suspicion or knowledge of the hypotheses at the end of the session.

Results and Discussion

As predicted, the three conditions did not differ in their appraisal of the economy (M inaction regret = 2.24; M action regret = 2.29; M control = 2.31, $F < 1$, NS). As intended, participants in the action regret condition identified their own recent regrets mostly as “action regrets” (86%), and those in the inaction regret condition as “inaction regrets” (88%) ($\chi^2(1) = 36.80$, $p < .001$). We predicted that activating future regret about something that consumers had failed to do would prompt them into action. An ANOVA revealed the predicted effect of anticipated inaction regret on spending ($F(2, 101) = 17.10$, $p < .001$). Participants in an inaction regret mindset allocated more money to spending ($M = \text{€}2868$) than those in the control condition ($M = \text{€}2338$) and those in an anticipated action regret mindset ($M = \text{€}1747$, $F(1, 101) = 22.47$, $p < .001$, $\eta^2 = .25$).

These results confirm that anticipated regret of inaction eliminates the blocking effects of external uncertainty. They also show that when trading-off spending and saving, spending is considered more active than saving. When anticipating regret about action, people spend considerably less and saved considerably more than in the other two conditions. Yet, even if it is quite conceivable that feelings of anticipated regret help explain, at least partly, the relationship between economic crises and consumers’ inaction, other mediators, such as a desire for flexibility or to avoid commitments, could also account for this relationship. Thus, further research is needed to understand whether anticipated regret not only unblocks uncertainty inaction but also helps explain consumer reactions to economic crises.

General Discussion

When consumers experience uncertainty about the financial situation, because of the state of the economy or the chances of winning a lottery prize, they rapidly, perhaps even automatically, switch to an inaction mode. The inaction mode is a fundamental response to external uncertainty: it not only reduced spending but

also actions to save in this study. This finding amends Katona's (1975) observation that during a recession and in times of inflation most people spend less, due to uncertainty. We found that people are also inclined to actively save less (Study 1 and Study 2). The combined reductions in active spending and saving led to increased liquidity: more uncommitted money to be actively spent or saved when opportunity knocks. The inaction mode is a response to the uncertainty of outcomes and not to their negative valence: inaction was also induced when the potential outcomes did not entail any potential losses or comprised only potential gains (Study 3a and Study 3b). The inaction mode may help consumers coping with anticipated regret and keeping flexibility. But it may ironically lead consumers to experiencing future regret, when opportunities to gain by action are forgone. Focusing people's attention on the future regrets of current inaction unblocks the effects of external uncertainty.

These findings were obtained across four studies with different samples (regular consumers, undergraduate students), methodologies (survey and experiments), manipulations of external uncertainty (direct, and indirect by means of a media identification task, or a prior gamble), dependent variables (behavioral intentions, money allocation, actual choice), in realistic (consumers at home and gamble for real money) and hypothetical contexts (money allocation), while controlling for other factors (socio-demographics, cognitive appraisals, affect valence). This builds confidence in the fundamental, perhaps automatic, nature of the bond between external uncertainty and inaction that this study identified.

Uncertainty-Inaction Bond

One implication of our theory is that other external uncertainties, besides the economic and financial uncertainties studied here, should also induce inaction and transfer to unrelated financial decision making, such as spending less and thus saving more. We tested this in a follow-up study. Ninety-three undergraduate students read a news item about the high (uncertain) or very low (certain) likelihood of contracting the Mexican flu or about tennis (control). Then in a purportedly unrelated other study, they performed a money allocation task similar to Study 2. Here, they allocated the money to six possible categories to make the task subtler (doing and buying useful things, doing and buying fun things, charity, and saving, with specific examples to clarify each category). Four out of the six allocation categories differed significantly between the three conditions, and all six were in

the expected direction. As expected, uncertain people allocated significantly more money to saving ($M = \text{€}2687$, overall $F(2, 90) = 27.2$, $p < .001$) and significantly less money to charity ($M = \text{€}32$, overall $F(2, 90) = 10.1$, $p < .001$), buying useful ($M = \text{€}540$; overall $F(2, 90) = 3.6$, $p = .031$) and fun things ($M = \text{€}666$, overall $F(2, 90) = 9.3$, $p < .001$) than control (M saving = $\text{€}1853$, M charity = $\text{€}84$, M useful buy = $\text{€}848$, M fun buy = $\text{€}618$) and certain people did ($M = \text{€}227$, M save = $\text{€}1409$, M useful buy = $\text{€}675$, M fun buy = $\text{€}945$). This suggests indeed that external uncertainty, even if it is not economic, has a broad-spectrum effect on inaction in spending. Note that uncertain people did not have the “urge to splurge” before the flu might hit because in all cases money allocated to spending was less than in the certain and control conditions.

Altogether, the findings of the four studies and the follow-up study indicate the fundamental bond between external uncertainty and inaction. Uncertainty can be readily induced and prompts inaction across a broad spectrum, and may clearly work against people’s best interests.

Implications

Our studies show that uncertainty feelings, over and above cognitive appraisals of the general economic and personal financial situation, influence financial decisions. This provides direct support for risk-as-feelings theory (Loewenstein, Weber, Hsee, and Welch 2001). That theory argues that current and anticipated future emotions, over and above cognitive appraisals of risk in terms of probabilities of negative outcomes, which have been the focus of much research, influence current decisions. Our findings point to the value of complementing marketing and policy surveys about consumer decisions with direct measures of specific emotions, rather than inferring the emotions from their cognitive appraisals. More importantly, our results reveal the importance of feeling uncertain. We speculate that risk is more strongly associated with the emotion of fear, because the danger (negative outcomes) can be “calculated” and might lead to more active coping strategies than external uncertainty does. It thus seems relevant in follow-up research to compare the influence of risk versus external uncertainty and how these differentially influence consumer decisions.

Businesses struck by reduced demand from consumers often cut prices in order to attract new customers and to sell more to existing customers, and they use advertising to make consumers “act now.” Deals on foreign holidays, cruises

and similar indulgences are opportunities for consumers who can spend but do not. Consider the call of a popular Internet site on personal finance: “There is no better time to travel than in a recession (given that you have some money, of course) because guess what? America’s not the only country experiencing economic hardships.”³ Yet, a contributor to an Internet travel forum confessed that despite sufficient financial means “...I will hold off on any future travel plans until I feel confident about our economic situation (both in our household and as a nation).”⁴ Rather than telling consumers to “act now because prices are at a historic low” and focus their attention even more on the present, our studies imply that advertising may more effectively activate consumers’ anticipated future regret of their current inaction (for instance as H&M’s in-store quotes claim in their 2011 fall campaign “If you don’t grab it now, tomorrow it may be gone forever”).

Our studies have implications for marketing of financial institutions as well. Saving rates of households are typically calculated as the proportion of earnings that are not spent, including money on current and checking accounts. The present research makes a case for considering other ratios as well, such as a liquid-to-total savings (liquid savings ratio, liquid saving being cash and funds that can immediately be withdrawn). Our findings hint at the intriguing possibility that liquid savings ratios may go up faster than total saving ratios during economic downturns. Kazarosian (1997) reports evidence for significant precautionary saving in response to income uncertainty in a panel study with 11 waves between 1966 and 1981. Such precautionary saving is typically active and via financial institutions. Yet, this does not preclude the possibility that liquid-to-total saving rates go up as well, and perhaps even faster. Precautionary savings and investments are often part of long-term commitments with interest premiums as reward. If it is indeed the case that consumers during economic downturns hold a higher proportion of their savings liquid to keep their options open and not experience future regret of current action, then financial institutions would be well-advised to target these with short-term, low commitment products, perhaps with checking facilities.

Limitations and Future Research

Our research has several limitations. First, we conducted our studies among consumers in a culture with extensive social security provisions and defined-benefit

³<http://www.walletpop.com/blog/2009/02/14/economic-crisis-best-time-to-travel/>, last accessed March 1, 2011.

⁴<http://www.fodors.com/community/europe/financial-crisi.cfm>, last accessed March 1, 2011.

pension plans. Thus, personal precautionary saving for retirement or even future subsistence is not a strong concern. This may have amplified the influence that uncertainty feelings have on inaction in not spending and passive saving, rather than on active precautionary saving or investing. Future research may test this speculation experimentally or cross-culturally.

Second, our experiments focused on the immediate effects of economic uncertainty on decisions. To the extent that the effects of uncertainty are short-lived, consumers may quickly recover from them. Then they would swiftly return to more reasoned decision making, where cognitive appraisals of the economy, as reflected in the Index of Consumer Sentiment, and interest rates on loans and savings may have a larger impact again. Even then, these short-lived effects would be important and they did influence momentary allocation decisions and intentions. In fact, fairly simple manipulations by means of news items with varying content immediately influenced economic appraisals, uncertainty feelings and consumer decisions. In view of this, the role of media coverage and content in starting and ending economic crises seems hard to overstate, and more consumer and marketing research on this issue using high-frequency panel data of consumption behavior is warranted (Rindfleisch, Malter, Ganesan, and Moorman 2008).

Third, our research does not clarify which specific mechanisms for doing nothing are driving consumer inaction in times of crisis. That is, as Anderson (2003) highlighted in his review on the psychology of doing nothing, consumer inaction can be disentangled into four different effects that share causes and effects: 1) choice deferral: choosing not to choose for the time being; 2) status quo bias: an inflated preference for the current state of affairs; 3) omission bias: an inflated preference for options that do not require action; and 4) inaction inertia: the tendency of a person to omit action when he or she already has passed up a similar, more attractive opportunity to act. Previous research shows that anticipated regret may help explain any of the four inaction effects. Yet, a desire for control and flexibility seems unlikely to explain status quo bias or inaction inertia. Thus, based on our theoretical framework, choice deferral and omission bias are most likely the decision avoidance mechanisms that come into play in times of crisis. Both biases may work in concert (Anderson 2003) or just one of them may arise in times of crisis. Yet, the way we tested consumers' responses to economic crises does not clarify which specific effect is driving our findings. Accordingly, a thorough understanding of consumer of consumer inaction in times of crisis requires further research that examines the specific inaction mechanisms.

In sum, we have found that feelings of economic uncertainty elicit a fundamental inaction tendency or wait-and-see mode. This blocks not only consumers' major spending decisions, but also and surprisingly their active saving decisions, even if the potential losses do not harm them personally or entail only prospective gains for them. Inaction serves to reduce future regret about current action and to retain flexibility in the face of an uncertain future, but may actually lead to lost opportunities to earn money. Focusing consumers on the future regrets of current inaction switches them back into an action mode. In this way, the present studies have identified how feelings of economic uncertainty block consumer decisions and a way to remedy this.

Chapter 3

The Connection Fee: How the Need to Connect Leads to Spending During Economic Downturns

Abstract: The general response of consumers during economic downturns is to become price sensitive and spend less, which in turn may deepen the crisis. Four studies provide evidence for an important exception to this pattern. We demonstrate that economic downturns arouse the need for social connection (Study 1). Importantly, people are willing to pay more for products and brands that are positioned to satisfy this need for social connection (Studies 2 and 3), even if these underperform on quality (Study 4). This reveals when consumers actually spend more during economic downturns.

Consumers spend less during economic downturns. They become price sensitive, shift from national to store brands, buy on promotion, and postpone big-ticket items (Ang, Leong, and Kotler 2000; Estelami, Lehmann, and Holden 2001; Hanna, Kizilbash, and Smart 1975; Lamey, Deleersnyder, Steenkamp, and Dekimpe 2007; Lamey, Deleersnyder, Steenkamp, and Dekimpe 2012). Although such economization strategies may help consumers to cope with the financial implications of an economic crisis, they do not necessarily help consumers to deal with the psychological implications of a crisis, such as feelings of stress, anxiety and uncertainty. Moreover, such economization strategies may aggravate the depth and duration of the crisis, and National Governments are hard pressed to avert or halt this (Krugman 2009). Having witnessed the Great Depression of the 1930s in Germany, the economic psychologist Katona (1975) explained the “consumer strikes” that lead to an almost stop in spending during economic downturns from a deep-seated uncertainty about the environment that goes beyond immediate economic loss. Flatters and Willmott (2009) have identified three consumer responses to the current economic downturn, which they expect to remain after the crisis is over, including increased and agile price sensitivity, discretionary thrift even among the rich, and a demand for simplicity in products and brands. We propose here that there is another immediate response to economic downturns that appears to have been overlooked, and that can lead to the opposite of economization. It holds the promise to partly compensate or remedy the consumer strike that results from economic downturns.

That is, we believe and aim to demonstrate that economic downturns arouse the need for social connection, and that people are willing to pay more for products and brands that are positioned to satisfy this need, even at the cost of obtaining inferior quality. Thus, people are willing to pay a “connection fee” in terms of higher prices and lower value. Support for this thesis would imply that rather than uniformly leading to increased price sensitivity, economic downturns can actually lead to reduced price sensitivity, namely when products and brands deliver on social connection and advertising communicates this.

Paying to Connect

The connection fee thesis is inspired by psychological research suggesting that an increase in the need to be connected with others is a typical human reaction to the

experience of environmental uncertainty and threat (Baumeister and Leary 1995; Rofe 1984). From an evolutionary perspective, social connections are essential for survival. They are associated with an improved ability to gather food and to obtain sympathy and thus shelter and protection from others (Buss and Kenrick 1998). Therefore, when people feel threatened, they typically seek the support of others—be that real others (Taylor 2006) or symbolic reminders of others (Gardner, Pickett, and Knowles 2005). Put differently, and inspired by recent findings of Griskevicius and colleagues (2006, 2009), when experiencing self-threats, individuals' preference for uniqueness (“stand out from the crowd”) will be dampened relative to when they feel safe. Thus, there is reason to believe that when people feel threatened by economic downturns, they have an increased need to connect. In fact, there is indirect support for the idea that the economic situation can influence the need to connect. Individuals from lower as compared to upper social classes were shown to have greater social engagement, and to act in a more interdependent and empathic rather than independent manner (Kraus, Côté, and Keltner 2010; Kraus and Keltner 2009). We argue that this heightened need to connect in times of economic crisis may unexpectedly lead to an increased willingness to pay for products and brands that are positioned to outperform competitors on such social connections. Then, an economic downturn would actually lead to increased spending in order to satisfy the need to connect. To establish the generalizability of the phenomenon, our studies use regular products that could be relevant for both personal and social use (such as pre-cooked meals, candy, game consoles, water, and liquid soap), rather than typically social connection products, such as cell phones, postcards, and social media, where the effects would be less surprising. We aim to show that in times of economic downturns it pays to position regular products and brands, that are not inherently social, as “we” rather than “me.”

In sum, basic research on the relation between external threats and the need for social connection hints at the possibility that when an economic crisis hits, the need for social connection should increase and affect consumer choices accordingly. This leads to the counterintuitive prediction that in times of economic crisis, when a dominant response is to economize, people may be willing to spend on “we” products, which signal social connection. Interestingly, this thesis extends recent findings on how resources can affect social motivations in two ways. First, we posit and show that regardless of the individual level of resources or income, the resource uncertainty linked to the economic downturn will drive individuals to feel an increased desire to connect. Second, we predict and show that the need

for social connection can be stronger than the increased price sensitivity that individuals experience in times of resource uncertainty. That is, our research shows that consumers may not only act in a more interdependent manner in times of self-threats and resource uncertainty, as previous research points out, but may even be willing to pay the dues to satisfy this need for social connection.

Four studies examined our thesis. Study 1 tested whether times of economic crisis indeed arouse a need for social connection, in a representative survey among regular consumers. Study 2 tested whether during economic downturns people are willing to pay more for products that are advertised as facilitators of social connection (e.g. “ready to share”) instead of facilitators of personal utility (e.g. “ready for you”). Pre-cooked meals and game consoles were the target products. Whereas Study 2 used textual stimuli (advertising slogans), Study 3 used pictorial stimuli, namely images of multiple versus single people on product packages. This increases generalizability of the effect across perceptual modalities and types of marketing stimuli. Target products were candy and liquid soap. Finally, Study 4 examined whether “product popularity” appeals (e.g. “60% of consumers preferred this product”) during economic downturns raise preferences and willingness to pay for the most popular product, even when this is a lower quality alternative. Taken together, the studies reveal how economic uncertainty increases consumers’ preference for social connection products, and thus their willingness to pay to connect.

Study 1: Need for Social Connection

An initial study tested the idea that people have a heightened need for social connection during economic downturns. We conducted a survey among a representative sample of 1900 adult (18 years and older) members of the CentER-Data Internet panel of Tilburg University (52% female, M age = 47, response rate = 58%) to explore in a non-controlled setting the association between the experience of economic downturns and social connection. Data collection took place in June 2010, when the country was experiencing an economic downturn, with frequent articles in newspapers, news on television conveying national budget cuts and uncertainty. We were able to insert our measures in a more general survey on consumers’ feelings and choices. Feelings of economic uncertainty were measured with two items: “When I imagine how the financial situation of my household

will be for the coming 12 months, I feel uncertain [certain, reverse coded],” on 7-point “not at all” to “exceptionally” response scales ($\alpha = .70$, $M = 3.43$, $SD = 1.26$). We measured need for social connection with five items from the need to belong scale (Leary, Kelly, Cottrell, and Schreindorfer 2007): “I try hard not to do things that will make other people avoid or reject me,” “I need to feel that there are people I can turn to in times of need,” “I want other people to accept me,” “I do not like being alone,” “I have a strong need to belong,” on 9-point “not at all” to “very much so” response scales ($\alpha = .67$, $M = 5.33$, $SD = 1.69$). Both measures were averaged across the respective items. We also had information about consumers’ appraisals about the economic situation, measured with the item: “How is the general economic situation in the Netherlands?” measured on 5-point “the crisis is clearly not over/the crisis is clearly over” scale. As predicted, uncertainty feelings were significantly associated with a need for social connection. Increased uncertainty was associated with higher need for social connections ($\beta = .14$, $t = 4.89$, $p < .001$). Importantly, in a follow-up regression analysis with socio-economic control variables (age, gender, monthly income and the interaction of income and uncertainty feelings¹) the relationship between uncertainty feelings and need for social connection remained significant (uncertainty feelings: $\beta = .15$, $t = 3.75$, $p = .001$; gender (male = 0, female = 1): $\beta = .11$, $t = 2.57$, $p < .01$; age: $\beta = .07$, $t = 1.79$, $p = .073$; income (logged): $\beta = -.14$, $t = -1.26$, $p = .21$; uncertainty and income interaction: $\beta = .083$, $t = .77$, $p = .44$; $R^2 = .054$). In addition, we tested the effect of economic appraisals on individuals’ need for social connection. Although economic appraisals significantly predicted the need for social connection after controlling for socio-economic control variables ($\beta = -.11$, $t = -2.59$, $p = .01$; $R^2 = .042$), this effect disappeared when uncertainty feelings were introduced in the model (economic appraisals: $\beta = -.074$, $t = -1.75$, $p = .081$; uncertainty feelings: $\beta = .13$, $t = 3.9$, $p = .001$; $R^2 = .053$). Given the link between uncertainty feelings and the need for social connection we find, these results provide initial evidence for the idea that indeed need for social connection is higher during economic downturns, independent of important socio-economic characteristics.

¹Given that previous research has shown that individuals from lower as compared to upper social classes have greater social engagement, and tend to act in a more interdependent and empathic rather than independent manner (Kraus, Côté, and Keltner 2010; Kraus and Keltner 2009), we examine this possible interaction effect between uncertainty feelings and income.

This first study was correlational. To establish more convincingly the relationship between the economic crisis and the need to connect, we measured need to connect under controlled conditions in Study 4. Besides, Studies 2-4 examine how increased social connection needs influence consumer preferences in times of economic crisis.

Study 2: Advertising Claims Pay-Off

Study 2 examined whether during economic downturns advertising slogans that describe the product in “we” instead of “me” terms can increase consumers’ willingness to pay.

Method

Seventy-two paid undergraduate students were randomly assigned to a condition of a two (economic crisis or control) by two (slogans: “we” or “me”) between-subjects design. The study was part of a series of studies conducted in the behavioral lab. To make the economic crisis salient, we used a “media identification task.” Participants read a news item and were asked to identify from which newspaper it most likely came. In this way, the content of the news items can be unobtrusively primed. Participants in the experimental, crisis, condition read: “Negative reports of the IMF: Recession far from over. The world is in a deep recession. The government pumps billions into the market and tightens the supervision of the financial sector to the economic crisis. Yet the effects are hardly noticeable. The country is in a severe recession. The pace of the economic downturn in the country was unprecedented. The International Monetary Fund (IMF) predicts that the national economy is shrinking more than ever. The economic contraction, according to the IMF will reach 5.2% this and the next year to 7.4%.” Participants in the control condition read a news item about small and large drops during rain. Then, all participants indicated to which newspaper that news item was most likely to belong. Next, in an ostensibly unrelated study, participants read an advertising slogan for each of two products (a pre-cooked meal and a game console) and were asked to indicate their willingness to pay for the product advertised. The slogans were presented together with a product. For each product, one slogan described the product in “we” terms (pre-cooked meal: “Ready to taste with others”; game console: “Enjoy together”) and the other slogan focused just on “me” (pre-cooked

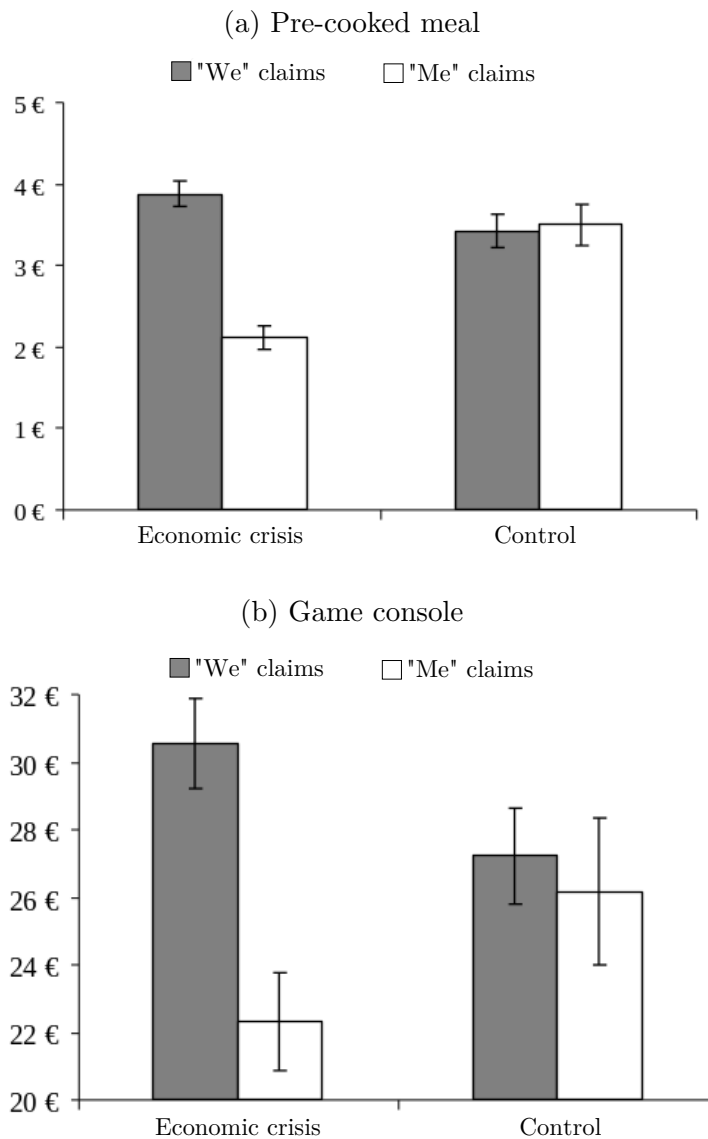
meal: “Ready for you to taste”; game console: “Enjoy yourself”). To control for individual differences in reference prices (Winer 1986), participants received a standard price range for each category (“Please state the price that you think you would be willing to pay for each of the products. As a reference, note that usually the price range of the category is: Pre-cooked meal = €2 - €6; Game console = €20 - €45”).

Additionally, a manipulation check for the crisis manipulation was included (“Will your financial situation become better, worse or stay the same in the coming twelve months?” on a 5-point “clearly worse” to “clearly better” response scale). Also, participants indicated the valence of their feelings, “sad/happy,” on a 9-point scale, to rule out the possibility that participants’ mood accounts for the possible differences between conditions.

A pre-test ($N = 40$, product-type between-subjects) had established that all slogans were judged to be equally attractive (“attractive” to “unattractive,” 7-point response scale, $F < 1$) and only differed in their social connection signal (“this slogan communicates the idea that the product provides an opportunity for connecting with others,” 7-point response scale, “strongly disagree” to “strongly agree,” pre-cooked meal: $M_{we} = 2.55$, $SD = .83$, $M_{me} = 5.65$, $SD = .67$, $F(1, 38) = 231.13$, $p < .001$); game console: $M_{we} = 6.05$, $SD = .69$, $M_{me} = 2.70$, $SD = .98$ ($F(1, 38) = 173.71$, $p < .001$)).

Results

Participants in the crisis condition were indeed more negative about the economy ($M = 3.14$) compared to those in the control condition ($M = 3.75$) ($F(1, 70) = 8.55$, $p = .005$). A repeated-measures ANOVA revealed a significant main effect of the type of advertising slogans ($F(1, 70) = 10.76$, $p = .002$, $\eta^2 = .14$) and more importantly a significant interaction between the economic situation and the type of advertising slogans ($F(3, 68) = 7.28$, $p = .009$, $\eta^2 = .11$; Figure 3.1). Participants in the crisis condition reported a higher willingness to pay for products with “we” slogans ($M_{meal} = €3.88$, $SD = .68$; $M_{game\ console} = €30.55$, $SD = 5.61$) than for products with “me” slogans ($M_{meal} = €2.11$, $SD = .61$; $M_{game\ console} = €22.33$, $SD = 6.21$; meal: $t = 7.02$, $p < .001$; game console: $t = 4.42$, $p < .001$), as well as compared to participants in the control condition (“we” slogans: $M_{meal} = €3.42$, $SD = .86$, $t = -2.44$, $p = .02$; $M_{game\ console} = €27.22$, $SD = 5.99$, $t = -2.09$, $p = .04$; “me” slogans: $M_{meal} = €3.50$,

Figure 3.1: Economic crisis and advertising slogan premiums (Study 2)

Note. Error bars indicate +/- 1 SE of Mean.

$SD = 1.06$, $t = -2.15$, $p = .04$; M game console = 26.17, $SD = 9.32$, $t = -2.51$, $p = .04$). Importantly, the two conditions did not differ in the overall valence of reported feelings (M crisis = 6.75, $SD = 1.46$; M control = 6.61, $SD = 1.18$, $F < 1$), and the interaction between the economic situation and advertising slogan was not significant for mood ($F < 1$), which rules out a mood-based account of the results.

Thus, when consumers were reminded of an economic downturn, advertising claims about social connection led to higher preferences and increased willingness

to pay. This is first evidence for our “connection fee” thesis.

Study 3: Communication Connection Through Product Packaging

Study 3 generalizes the “connection fee” thesis further. It examines product packages that contain photographs of a single person versus a group of people as social connection signals. This goes beyond the verbal advertising slogans used in Study 2. It reflects social connection in packaging, which is a permanent medium of communication, rather than in advertising, which is a temporary medium of communication. Also, Study 3 tested the robustness of the results by using a different crisis manipulation than the news identification.

Method

Eighty-three volunteer, undergraduate students were randomly assigned to a two (economic crisis or control) by two (package: group of people or single person) between-subjects design.

As in previous studies, participants were told that they would participate in several unrelated studies. First, they completed a selective recall task, designed to induce an economic crisis [neutral] state. The task was presented as a study on visual imagery. Participants were asked to recall and describe as vividly as possible the recent and current economic situation and economic developments in the country [those in the control condition were asked to describe a recent and current mundane event that did not create strong positive or negative feelings]. After the manipulation, in an ostensibly unrelated study, participants saw the images of the two product packages (candy and liquid soap, Figure 3.2). Next to each product image, additional information ensured that the two product packages were of the same size.

A pre-test ($N = 30$, product-type between-subjects) had established that all pairs of products were judged to be equally attractive and similar in terms of quality (“attractive” to “unattractive,” and “low quality” to “high quality” 7-point response scales, $F < 1$) and only differed in their social connection signal (“this product package communicates a sense of belongingness,” 7-point response scale, “strongly disagree” to “strongly agree,” candy: M one person = 3.33, $SD =$

Figure 3.2: Choice sets (Study 3)

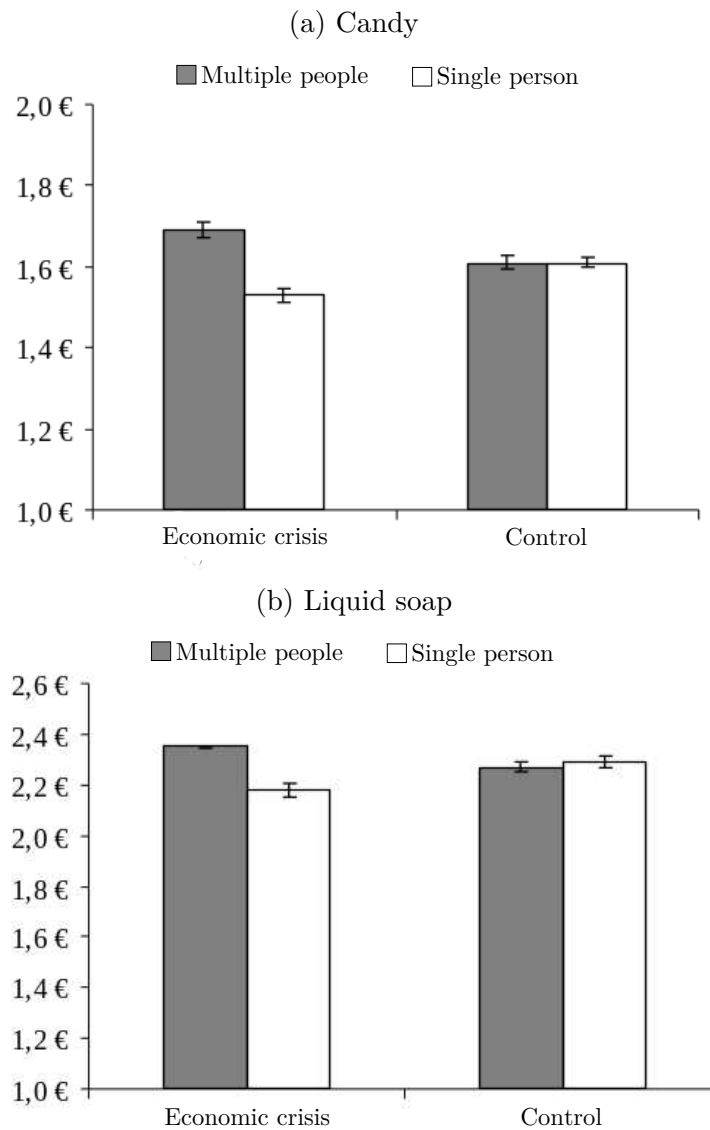
1.10, M multiple people = 4.60, $SD = 1.35$ ($F(1, 28) = 29.14$, $p < .001$); Liquid soap: M single person = 3.47, $SD = .92$, M multiple people = 4.93, $SD = 1.03$, ($F(1, 28) = 16.94$, $p < .001$).

Participants reported the price they would be willing to pay for each of the products. As in Study 2, participants received a reference price, in this case the price of the leading brand in the category (“Please indicate the price that you would be willing to pay for each of the products. As a reference, note that the price of the leading brand in the category is: Candy = €1.85 , Liquid soap = €2.50”).

Finally, a manipulation check established the experienced state of the economy (“Will the economic situation in the country become better, worse or stay the same in the coming twelve months?” on 5-point “clearly worse/clearly better” scale).

Results

Indeed, participants in the crisis condition perceived the economic situation as more negative ($M = 2.22$, $SD = .70$) compared to those in the control condition ($M = 3.36$, $SD = .76$) ($F(1, 82) = 50.97$, $p < .001$). A repeated-measures ANOVA revealed a significant interaction between the economic situation and the type of product package ($F(3, 79) = 40.32$, $p < .001$, $\eta^2 = .33$; Figure 3.3). Participants in the crisis condition were willing to pay significantly more for the products with the image of multiple people on their package (M candy = €1.69, $SD = .09$; M liquid soap = €2.35, $SD = .1$) than for the product with a single person on the

Figure 3.3: Economic crisis and willingness to pay (Study 3)

Note. Error bars indicate +/- 1 SE of Mean.

package (M candy = €1.53, SD = .08, t = 6.27, p < .001; M liquid soap = €2.18, SD = .12, t = 5.27, p < .001), as well as compared to the control condition (Multiple people: M candy = €1.61, SD = .08, t = 3.24, p = .002; M liquid soap = €2.27, SD = .09, t = 2.44, p = .02; single person: M candy = €1.61, SD = .06, t = 3.28, p = .002; M liquid soap = €2.29, SD = .1, t = 2.06, p < .05).

This demonstrates that when consumers experience an economic downturn, social connection signals on product packages, such as a picture with multiple people, influence consumer product preferences and increases their willingness to

pay for a product.

Study 4: Product Popularity Appeals Pay Off

Study 4 tested the idea that product popularity appeals are particularly powerful when people are reminded of an economic crisis. Previous research has shown that going along with other people, that is conforming, tends to produce liking (Chartrand and Bargh 1999; Cialdini and Goldstein 2004). Thus, imitation or conformity tends to increase when individuals have a heightened connection motive. Marketers often use this tendency for conformity to promote products, for instance, by using persuasive appeals depicting products as being top sellers. Building on this idea, Study 4 examined whether during economic downturns people will be persuaded by product popularity appeals even when it entails forfeiting quality.

It is important to note that accuracy motivations can also be an alternative explanation for conformity. That is, consumers' conformism may not only reflect their need to restore a sense of social connection, but it may also be the result of their belief that a product's popularity may signal product quality information (Deutsch and Gerard 1955). Hence, Study 4 was designed to rule out the possibility that conformity during economic downturns is driven by accuracy expectations (informational social influence) and to show that consumers tend to conform due to the motivation to restore or strengthen social connection (normative social influence).

Method

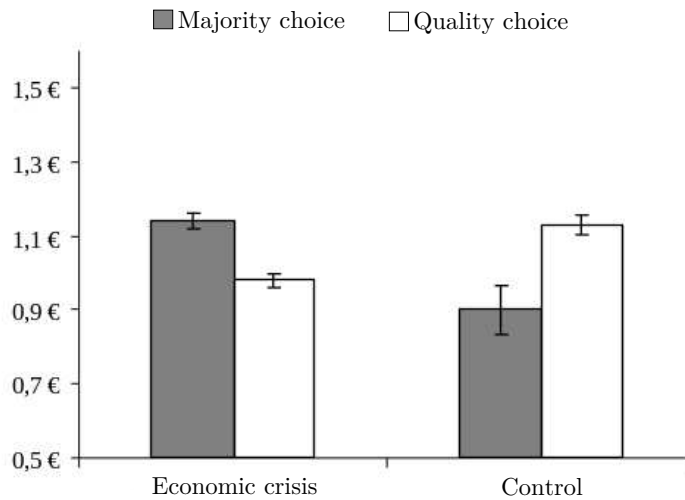
Forty-three undergraduate students were allocated to the conditions of a two-group (economic crisis and control) between-subjects design. As in Study 2, a media identification task was used and participants read news headlines related with the crisis: "The world is in a deep recession," "The International Monetary Fund (IMF) predicts that the economy is shrinking more than ever," "Top economists warn that the economic crisis is far from over" (participants in the control group read three neutral news headlines: "People eat more after going to the gym," "Sudoku puzzles are one of the most popular newspaper features" and "Honey refuels the brain within minutes because it is almost equal parts glucose and fructose"). Next, in a purportedly unrelated study, participants' need for social connection was assessed with the same five items as in Study 1 ($\alpha = .91$, $M = 4.81$,

$SD = 1.38$). As predicted, participants in the crisis condition had a significantly higher need for social connection ($M = 5.41$, $SD = 1.39$) than participants in the control condition ($M = 4.17$, $SD = 1.08$, $F(1, 41) = 10.57$, $p = .002$, $\eta^2 = .20$). This affirms the generality of the crisis effect on social connection motivation.

After this, in the main study, participants were asked to participate in a water tasting test. Participants were asked to rank two water brands (A and B) in terms of quality and taste pleasantness in a blind evaluation task. The presented brands were chosen such that brand B would be preferred over brand A by the majority of participants. A pre-test ($N = 16$) confirmed this (measured on a 7-point “low/high quality” scale, Water brand A: $M = 2.94$, $SD = 1.06$; Water brand B: $M = 5.12$, $SD = 1.10$, $t = -5.64$, $p < .001$). After the blind evaluation task, and with their own quality rankings visible, participants indicated how much they would be willing to pay for each of the two waters they had just tasted. Before indicating this, participants were given the opportunity to examine additional information about each water brand (all did). The additional information indicated that water brand A (the one with the lowest quality) was preferred by a majority of consumers but was obtained from a worse underground water source than water brand B according to independent experts (reinforcing the lower quality perception). Then, participants indicated how much they would be willing to pay for a bottle of each of the water brands. The same manipulation check was included as before.

Results

Participants in the crisis condition were indeed more negative about the economy ($M = 2.23$, $SD = .87$) as compared to those in the control condition ($M = 3.05$, $SD = .67$) ($F(1, 41) = 11.95$, $p = .001$, $\eta^2 = .23$). As predicted, the majority of participants in the blind taste test ($N = 34$, 79%) ranked water brand B first in terms of quality and taste pleasantness, and these results did not differ between conditions (N crisis = 16, 76%; N control = 18, 81%). In view of these results, if popularity appeals would lead to a higher willingness to pay for brand A than brand B, the effect should be due to normative rather than informational social influence (such as quality signals). A repeated-measures ANOVA analysis revealed a significant interaction between water brand (A or B) and crisis condition ($F(1, 41) = 46.05$, $p < .001$, $\eta^2 = .5$; Figure 3.4). Planned contrasts revealed that participants in the crisis condition were willing to pay more for brand A (“majority choice being of worse quality,” $M = \text{€}1.14$, $SD = .10$) than for brand B ($M = \text{€}.98$,

Figure 3.4: Economic crisis and willingness to pay (Study 4)

Note. Error bars indicate +/- 1 SE of Mean.

$SD = .09$; $t = 5.21$, $p < .001$). That is, participants in the economic downturn condition tended to conform and were willing to pay more for brand A that was described as being liked by a majority of consumers, even though it was of a lower quality. In contrast, participants in the control condition were willing to pay more for brand B, which they ranked and was described as being higher in quality, than for brand A (M brand A = €0.90, $SD = .31$; M brand B = €1.13, $SD = .12$; $t = -3.21$, $p = .003$).

This supports that when the economic crisis is made salient, people tend to conform to the choices of the majority and increase their willingness to pay for the most popular product, even at the expense of a lower product quality.

General Discussion

Four studies demonstrated that economic downturns arouse the need for social connection and that therefore people are willing to pay more for products and brands that are positioned to satisfy this need. This research is the first to our knowledge to demonstrate the influence that a non-financial factor, like the need for social connection, can exert on consumer preferences in times of economic downturns. More counter intuitively, these findings also show that cues that remind social connection can actually lead to reduced price sensitivity in times of crisis, and thus provide an exception for the idea that economic crises uniformly

lead to increased price sensitivity. Importantly, these findings converge with recent studies that show how some categories exhibit a procyclical price sensitivity (e.g. Gordon, Brett, Goldfarb, and Li 2012). Additionally, this research extends previous findings on how economic resources can shape social engagement (Kraus and Keltner 2009), by showing that regardless of the social position (e.g., level of income), when a crisis hits and feelings of economic uncertainty increase, the need for social connection rises too.

These results have implications for companies that strive to promote consumption in times of economic crisis. Traditional approaches to encourage spending during economic downturns include increasing financial incentives and focusing on price deals (Krugman 2009). However, falling prices and retailer promotions, for example, hold the risk of discouraging sales further if buyers delay purchases in the expectation of additional price promotions. Hence, focusing on non-financial factors, such as when products and brands deliver on social connection and advertising communicates this social connection may be effective alternative strategies to promote consumption in times of crisis. Consider, for example, the actual advertising slogan “Be Sociable, Have a Pepsi” used by the soft drink brand in the early nineteen sixties. In view of the present findings, this slogan might help Pepsi’s sales in times of economic uncertainty rather than during rapid economic growth.

The present set of studies has several limitations that may stimulate further research. First, our research focused on the effect of economic downturns on the need for social connection and consequent consumer choices. The potential deeper-seated processes that cause these effects were pointed out throughout the paper, but were not empirically tested yet by means of careful mediation testing or controlled follow-up studies. Such studies may examine, for instance, to what extent the heightened search for social connection during economic downturns is due to a need for psychological comfort (emotional coping), resource sharing (cooperation), sheer flight responses (hiding in the group), or perhaps a re-appraisal of life values (Williams and Somer 1997) and how these various factors guide specific consumer responses (Knight, Chisholm, Nigel, and Godfrey 1988). Moreover, the results of our experiments led to an a priori unexpected finding. Our results suggest that when consumers are shown products endorsed with “me” social cues in times of economic crisis, these cues may negatively affect consumers’ willingness to pay. Various phenomenon other than social connectedness may account for this contrast. For instance, this effect could indicate heightened sensitivity or accessibility

stemming from one's own recent "loneliness or need for connection" experience. Yet, an in-group bias (King, Knight, and Hebl 2010) could also account for this contrast if the individual cues presented are associated with out-group members. Furthermore, the autonomy inducing effect of money reminders shown by recent research (Reutner and Wänke 2012) could also help explain these findings. Thus, future research may further explore the effect of focusing on individual experiences in times of crisis.

Second and related to the previous issue, our studies focused on a specific set of products and brands that deliver on social connection, but did not include cues related to social interactions. It is known that an increased need to connect promotes generosity towards others who represent good prospects for future friendship (Maner, DeWall, Baumeister, and Schaller 2007). Likewise, when the need to belong is satisfied prosocial behaviors decrease (Abraham, Pocheptsova, and Ferraro 2012). As a case in point, Tversky and Shafir (1992) showed that cooperation rates were higher when an opponent's responses were uncertain. Future studies may test whether those prosocial behaviors will also increase in times of economic uncertainty in order to restore a sense of social connection. Perhaps, the need for connection may even lead to altruistic behaviors that have no direct financial or other economic benefits to self, such as anonymous donations. This speculation fits within the broader idea that if desire for social connections increases attention to social cues, consumers may also be more sensitive to charity appeals or fundraising events. For instance Oxfam UK recently reported that voluntary income from appeals, fundraising events and one-off donations increased by 6.6% during 2012. Likewise, Kamakura and Du (2012) recently showed that individuals preference towards charity donations increases when a recession hits. However, there is also evidence that people only behave in a more prosocial manner towards targets that represent close others and future friends (Dovidio, Kawakami, Johnson, and Howard 1997; Loewenstein and Small 2007). Therefore, it would be of interest to test for the effect of economic crises on prosocial behaviors and any moderating effects of this linkage

Third, our studies built on the hypothesis that social connection relates to survival benefits. The basic assumption of the utility affiliation theory (Rofe 1984) is that the strength of the affiliation tendency in a stressful situation is a function of the extent of benefit and/or damage that may be caused to an individual by being with others. Hence, for instance when the "crisis" is individual-specific rather than a collective phenomenon, people could try to connect with others to

increase chances of survival. However, they could also have a reduced need to connect with others who have a better economic position or are less negatively affected by the crisis, in order to avoid negative feelings due to social comparisons. Schachter (1959) coined the expression “misery does not love just any kind of company, it loves only miserable company” (p. 24). Likewise, previous research on connectedness has shown that under threat or competition of resources individuals show an in-group bias, which leads them to have a preference for social cues related with close rather than distant others (Brewer 1999; King, Knight, and Hebl 2010). A key question is then how consumers will respond in times of economic crisis if the target of the social cue is a more distant other or a cue that is associated with an individual’s out-groups versus a close other or an in-group? In our experiments it is not clear whether participants associated the social cues presented with an in-group or not. If the social cues shown in our experiments fulfill the need to connect to close others and are consistent with individuals’ in-group bias, the effects shown in our studies might differ for products and ads with social cues that are distant or dissimilar to consumers’ in-group. Therefore, for future research it would be of interest to test for any moderating effect of the target of the social cues and the boundary conditions of the effects of economic crises on the need for connectedness.

Fourth, the results found in this chapter converge with the relationship between social cues and other types of threats (such as mortality salience or resource scarcity) shown by previous research. Yet, the need for security can be motivated by a wide range of developmental, personal, social and existential threats, which lead consumers to seek very different forms of security. For instance, previous studies have already suggested that death reminders and existential threats may diverge in the specific motivations inspired (Rindfleisch, Burroughs, and Wong 2009). Similarly, economic crises represent a specific form of environmental threat. In particular, in comparison to other environmental threats (such as death reminders or existential threats), economic crises can comprise multiple threats simultaneously, such as resource availability, individuals’ position within the community or group, or group belongingness. In this sense, an economic downturn will incite diverse behavioral shifts depending on which particular needs are threatened in a specific group or individual. For instance, recent research has shown that exclusion threats may produce either self-focused or prosocial responses, depending on which needs are threatened (Lee and Shrum 2012). Thus, when a crisis hits both prosocial and self-focused responses may arise depending on the specific threats that are

made salient. Given that our experiments were conducted among students who belonged to a similar group and whose position within the community was unlikely to be threatened by the crisis, these different social needs and threats were probably unobserved in our studies and only resource threat was elicited. Hence, additional cross-cultural and cross-socioeconomic experiments are likely to enrich our findings and illustrate how the different threats elicited by an economic crisis influence social motivations and consumer responses.

In sum, we have found that during economic downturns cues that remind social connection are strong determinants of consumer preferences that can even lead to lower consumer price sensitivity. That is the fee for social connection.

Chapter 4

Too Few Good Men: Dressing and Spending to Attract Resourceful Males in Times of Crisis

Abstract: When faced with an economic downturn, women's clothing and fashion preferences become more geared to mate competition. Women chose sexy clothing rather than more conservative clothing (Study 1) when made aware of the economic crisis. Women were also willing to pay more for sexy clothing, and these effects were driven by mating desire and intra-female competition, not by negative mood or reduced self-esteem (Studies 2 and 3).

In the 1920s, the economist George Taylor proposed the idea that skirt hemlines drop when the economy drops (Nystrom 1928). Decades later, a range of articles in magazines and newspapers still speculate about the existence and validity of the relationship between hemlines, the so-called “hemline index” and economic conditions. For example, a Google search on the hemline index and economic downturns gives around 9000 results. The common belief is that when an economy drops, hemlines drop as well (Barber 1999; van Baardwijk, and Franses 2010). Yet, other studies suggest that falling economic conditions lead to rising hemlines (Hill, Donovan, and Koyama 2005). Speculative explanations for these effects are based on correlational evidence—based on, for instance, the relationship between stock prices or gross domestic product and skirt length estimations from magazines—and vary from modesty in times of austerity to looser morale when the economy is down.

We provide experimental evidence for the idea that in times of economic crisis women prefer, and even value sexier clothing, such as shorter skirts and high heels. We argue that this effect is due to women's increased desire to find an attractive mate, as mates will be able to provide security in rough economic times. The increased intra-female competition for mates boosts the value of the instruments used. That is, we posit that in times of economic downturn women prefer and are willing to pay more for sexier, more revealing clothing as it helps them gain access to males. In the present research we narrow our focus to women's strategies to attract a mate in times of crisis given that gender differences arise in the behavioral strategies employed by men and women when attracting a mate (Buss 1988; Schmitt and Buss 1996).

Support for our thesis that when economies fall, hemlines fall, would go against some popular ideas, but more importantly, reveal how the economy influences social preferences. Recently Hill et al. (2012) have provided a first experimental demonstration of the so called “lipstick effect,” by showing that sales of beauty products and form-fitting clothing increase in times of crisis given women's desire to look attractive for men. Importantly, our paper further extends these findings by showing that women's mating desire not only influences their preferences for sexy clothing but also the value attached to those clothes, and hence women's willingness to pay to dress to impress. In addition, we show that self-esteem repair motives do not account for these effects and provide some experimental support for the idea that resourceful male scarcity helps explain women's desire to dress to impress when crisis hits. For consumer behavior theory and marketing

practice, it is important to further knowledge of how economic downturns affect consumer choices. Previous research suggests that economic crises lead to spending cutbacks. Support for our predictions would imply, in contrast, that in times of crisis females may actually increase spending in the competition for males. In the United States alone, women spend well over \$100 billion annually on fashion apparel (Durante, Griskevicius, Hill, Perilloux, and Li 2011). Thus, given the economic importance of the fashion industry, understanding which factors influence women's fashion preferences is a key issue. Additionally, given the prevalent role of sexiness in advertising campaigns and product communication (Bernard, Gervais, Allen, Campomizzi, and Klein 2012; Businessnewsdaily 2012), it is relevant to understand how crises shape consumer preferences about sexiness in order to design effective communication campaigns when a crisis hits. This research sheds light on these questions by providing experimental evidence about the effects that economic recessions have on women's preferences and willingness to pay for sexier, more revealing clothing.

Crisis and Intra-Female Competition

A question that is still unanswered is: do times of crisis lead women to prefer sexier clothing (such as shorter skirts)? And if so, what may be the psychology behind such an effect? We propose that in times of crisis, women's motivation to find a mate should increase because this may help them to live a secure life. In times of crisis, when economic security is lacking, limiting financial uncertainty becomes a primary motivation. A potential strategy for women to gain financial security is to find a mate (man) who can provide these resources. Previous research has already shown that when choosing a mate, women usually prefer characteristics in potential mates that signal the possession or likely acquisition of resources (Buss 1988; Buss and Schmitt 1993).

In an explorative study, we investigated this link between economic downturns and women's mating desire with data obtained from a representative survey about consumer decisions and economy ($N = 590$ women, M age = 34 years, $SD = 8.6$). The dataset we worked with included a measure of consumers' feelings of uncertainty about their future economic situation and a measure of their mating motivation (the later adapted from Baker and Maner 2008; Maner, Gailliot, Rouby, and Miller 2007; both measured on a 7-point "not at all/very much" scale) and

socio-demographic factors (age, education, and employment) as control variables. The more uncertain women felt about their future economic situation, the stronger their mating motivation was ($\beta = .123$, $t = 3.89$, $p < .001$, $R^2 = .12$). Importantly, their professional status (employed or not) did not have a significant effect ($\beta = -.05$, $t = -1.17$, $p = .24$). This suggests that indeed female demand for a mate increases in times of economic crisis.

Whereas females' desire for mating increases during economic downturns, the availability of financially secure male mates decreases, because earning capacity and investments and savings tend to be scarcer or more uncertain. Thus, at the same time that female demand for a male mate increases the supply of resourceful men decreases. Because of this, competition for resourceful males is likely to increase in times of economic crisis. This, we predict, should lead to escalating means to secure a male mate. Thus, we suggest that during economic downturns women may not cut down on enhancing their appearance and sexiness, but prefer and be willing to pay a premium for clothes that increase their chances of finding a mate with resources. That is, in times of economic crisis, women are extra motivated to "dress to impress."

Research on evolutionary psychology provides indirect support for this hypothesis. It suggests that female mating behavior is most responsive to factors affecting resource availability and environmental harshness (Lenton, Penke, Todd, and Fasolo 2011), and it shows that intra-female competition for a mate becomes especially strong when possession of resources varies greatly among males (Dawkins 1986; Turke and Betzig 1985; Viming 1986). When women perceive such an intensified female-female competition for a mate, physical attractiveness is the dimension on which competition focuses (Buss and Dedden 1990; Fisher 2004); this is the characteristic that contributes most to a woman's male desirability (Maner et al. 2003, Fink and Penton-Voak 2002). In support, correlational research by Barber (1999) found that skirt length covaried with the sex ratio, such that women wore shorter skirts when there were fewer men. Baumeister and Vohs (2004) posit that wearing sexy or more revealing clothes is economically a wise strategy to compete with other women. Also, at peak fertility women non-consciously choose products that enhance appearance to outdo attractive rival women (Durante, Norman and Haselton 2008; Durante, Giskevicius, Hill, Perilloux, and Li 2011). That is, females are aware of the mating signal function of their clothing (Grammer, Renninger, and Fischer 2004).

In sum then, there is reason to believe that female competition for access to a mate can have an active role in women's preferences and value for sexy clothing during economic downturns. Three controlled studies tested this prediction.

Overview of Studies

Three controlled studies were conducted to test the predictions. Study 1 examines whether in times of economic uncertainty women prefer more, rather than less, revealing female clothing. It also explores if lower levels of self-esteem could explain these preferences. Study 2 tests whether under economic uncertainty, female consumers are even willing to pay more for sexy female clothing and that these effects are not explained by lower levels of appearance self-esteem or mood differences. Study 3 provides further evidence that women's choices for revealing products when an economic crisis hits are determined by increased intra-female mate competition. Taken together, our findings show that during economic crises women's preferences for sexier female items increase and that these effects are due to desires to compete on the market for mates.

Study 1: Revealing Product Choices

Method

Forty-nine volunteer female undergraduate students (M age = 19) were randomly assigned to one of two experimental conditions (economic crisis and control condition).

Participants were informed that they would participate in several unrelated studies consisting of paper-and-pencil tasks. The first task was presented as a study on the evaluation of print media content (but was actually the crisis-induction procedure). Participants in the crisis condition were asked to read a (purported) news item about the crisis and to judge from which newspaper it came: "It is official, the financial crisis that shakes the country since 2008 has suffered a worsening and a second recession has been declared. The official forecasts about GDP growth are being successively revised downwards by the Ministry of Finance since 2008. In February 2009 it was confirmed that the country had officially entered in a recession. Earlier this year, estimates were revised and it was announced that the economic contraction and the unemployment rates would

worsen in 2011 and 2012. Thus, our country has been assigned one of the worst economic outlooks among the advanced economies.”

Participants in the control group read a news item on the distribution of small and large raindrops. All participants indicated from which of several newspapers they thought the news item came.

Next, participants were told that the subsequent section was a study on fashion design and product preferences, and they were asked to complete a shopping task. Participants were presented pairs of pictures of various fashion products, in a randomized order. They were instructed as follows: “Select one item from each pair that you would like to buy for yourself and take home with you today. Note that both items in each set of products presented have a similar quality and price.” The products consisted of women’s clothing (tops, skirts, and bras) and shoes (see Figure 4.1). In each pair, one of the products was pretested to be more sexy, and the other to be less sexy. Three filler product pairs were included in which both items were less sexy to avoid suspicion of the actual goal of the study. Similarly to previous research (Durante, Griskevicius, Hill, Perilloux, and Li 2011) photographs of the specific items were selected to be generally appealing to the sample population, and the sexier items were selected to be sexy but not blatantly sexual. Also items were selected to be relatively similar in price to one another, and items were selected to not contain any identifiable brand information. A pretest ($N = 20$) confirmed the success of stimulus development. The sexy items were relatively more sexy than the other items, measured on a 9-point “not at all sexy” to “extremely sexy” scale (skirt: M sexy = 8.35, $SD = .88$, M conservative = 6.7, $SD = 1.22$; shoes: M sexy = 6.65, $SD = 1.18$, M conservative = 4.25, $SD = 1.68$; bra: M sexy = 8, $SD = .86$, M conservative = 6.8, $SD = 1.73$; t-shirt: M sexy = 6.15, $SD = 1.46$, M conservative = 4.95, $SD = 1.35$). In addition, we examined an alternative account to the mating motives as drivers of women’s preferences for appearance enhancing products when an economic crisis hits. If economic downturns lead to lower levels of self-esteem among women, their preference for more revealing, sexier products could be due to self-esteem repair motives (Kwon and Shim 1999). To explore this alternative account, participants’ self-esteem (Rosenberg 1965) was measured. A manipulation check was also included to assess perceptions about the state of the economy, measured with the item of the index of consumer sentiment: “Will your financial situation become better, worse or stay the same in the coming twelve months?”, on 5-point “clearly worse/better”

scale. Finally, participants indicated the valence of their feelings, sad/happy, on a 9-point scale, to rule out the possibility that mood biases the results.

Results

The manipulation check confirmed that participants in the crisis condition indeed perceived the economic situation more negatively than participants in the control condition (M control = 3.30, SD = .81, M crisis = 2.60, SD = .91, $F(1, 47) = 7.88$, $p = .007$). Differences in mood were not significant across conditions (M control = 5.42, SD = 1.06, M crisis = 5.48, SD = 1.19, $F < 1$). Then we compared the number of sexy products chosen between conditions with a repeated choices logistic regression. The results revealed a significant effect of the economic situation on women's preference for sexy clothing ($\beta = .79$, $t = 2.12$, $p = .034$). Participants in the crisis condition were more likely to purchase the sexy items (average proportion of sexy items: $M = .72$, $SD = .19$), compared to participants in the control condition ($M = .55$, $SD = .34$). Next we analyzed whether self-esteem repair motives could account for these effects. First the items of the scale were averaged to form a consumer self-esteem scale ($\alpha = .74$, $M = 2.52$, $SD = .44$). Importantly, the control and crisis conditions did not differ in their levels of self-esteem: M crisis = 2.58, $SD = .43$, M control = 2.46, $SD = .44$, $F < 1$).

These results indicate that indeed when women experience economic uncertainty they prefer more over less sexy clothing and self-esteem repair motives do not account for these effects.

Study 2: Revealing Price Premiums

Study 1 found that when prices are the same, women prefer sexier clothing in times of economic crisis. Study 2 tested whether times of economic crisis also translate into a higher willingness to pay for sexy female clothing. Moreover, we investigated whether perceived intra-female competition for a mate is indeed stronger in times of economic crisis and thus can account for female clothing preferences. In addition, we further examined the alternative account that preference for sexier products could be due to self-esteem repair motives and we studied women's levels of appearance self-esteem aiming to further rule out this account.

Figure 4.1: Stimuli for Study 1

(a) Relatively more
sexy/revealing



(b) Relatively less
sexy/revealing



Method

Eighty-three volunteer undergraduate students from an introductory marketing course participated in an experiment with a two (economic crisis, and control condition) by two (sexy clothing, and conservative clothing) between participants design.

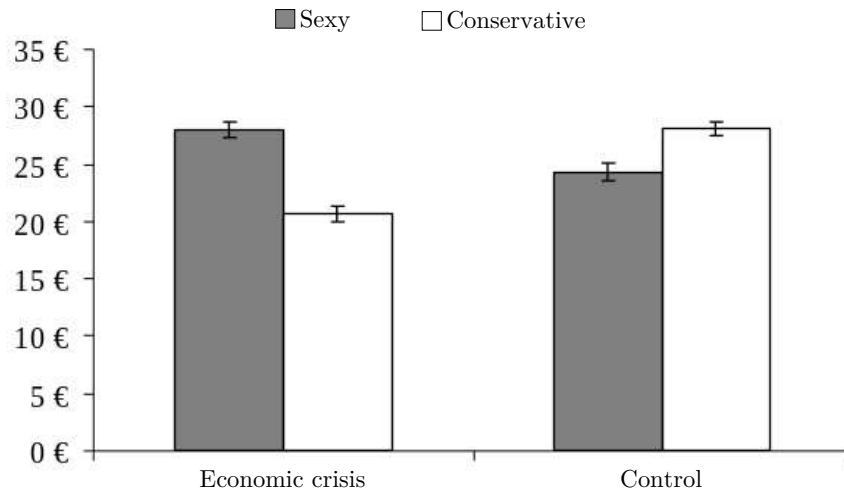
The methodology and stimuli were similar to those employed in Study 1. After completing the same “evaluation of print media content” priming task, participants indicated their willingness to pay for each product. In order to control for differences generated by individual reference prices (Winer 1986), participants were informed about the standard price range for the product categories (“Please state the price that you would be willing to pay for each of the products. As a reference, note that usually the price range of the category is €15 - €45”).

Finally, participants completed a measure of perceived intra-female competition for a mate (“How strong is currently the competition among women to engage with a male with desirable mate characteristics?” on a 7-point “not at all strong-very strong” scale). The question was embedded in a set of distracter items (e.g., “How motivated are you currently to help others in need?” and “How strong is currently the competition among men for financial security?”). To further rule out the alternative account that motivations of self-esteem repair are driving sexy clothing preferences in times of crisis, participants’ appearance self-esteem (Heatherton and Polivy 1991) was measured. Finally, similarly to Study 1, a manipulation check was included for the perceptions about the state of the economy. Participants showed no suspicion or knowledge of the hypotheses at the end of the session.

Results

The manipulation check confirmed that participants in the crisis condition perceived the economic situation more negatively than participants in the control condition (M crisis = 2.41, SD = .84, M control = 3.10, SD = .85, $F(1, 81) = 13.83$, $p < .001$, $\eta^2 = .15$). Then, we tested the influence of the state of the economy on participants’ willingness to pay for female sexy products (averaged across the four products). An ANOVA showed a main effect of the economic situation ($F(1, 81) = 6.75$, $p = .01$, $\eta^2 = .079$) and product sexiness ($F(1, 81) = 6.02$, $p = .02$, $\eta^2 = .071$), and in support for our prediction, a significant interaction between the economic situation and women’s willingness to pay for types of clothing ($F(3,$

Figure 4.2: Willingness to pay for sexier products as a function of the economic situation (Study 2)



Note. Error bars indicate +/- 1 SE of Mean.

79) = 59.52, $p < .001$, $\eta^2 = .4$; see Figure 4.2). Participants in the crisis condition were willing to pay more for female sexy products ($M = \text{€}27.99$, $SD = 3.48$), compared to participants in the control condition ($M = \text{€}24.31$, $SD = 3.59$). We then analyzed whether self-esteem repair motives could account for these effects. First the items of each scale were averaged to form an appearance self-esteem scale ($\alpha = .65$, $M = 4.07$, $SD = .50$). Importantly, the control and crisis conditions did not differ in their levels of appearance self-esteem (M crisis = 4.14, $SD = .51$; M control = 3.98, $SD = .48$, $F(1, 81) = 1.94$, $p = .17$). We then tested participants' perceived intra-female competition for a mate. Interestingly, participants in the crisis condition had a stronger perceived intra-female competition for a mate ($M = 4.61$, $SD = .99$) than participants in the control group ($M = 3.64$, $SD = .87$, $F(1, 81) = 22.18$, $p < .001$, $\eta^2 = .22$).

The results of this study provide additional evidence for women's preference for sexy clothing when an economic crisis hits. Moreover, they further rule out self-esteem repair motives as alternative account for these effects.

Study 3: Intra-Female Competition as Revealed in Product Choices

The objectives of Study 3 are twofold. First, it further investigates whether women's sexier clothing choices in times of crisis are, at least partly, driven by higher intra-female mate competition. Previous research has shown that sex ratios are an important driver of intra-gender competition (Pollet and Nettle 2008; Stone, Shackelford, and Buss 2007). Specifically, unbalanced sex ratios lead to an increase in the rarer gender's competition for a mate, while the abundant gender determines the mating strategies (Campbell 2004; Griskevicius et al. 2012). This suggests that, when women are primed with an abundant supply of men with resources in times of crisis, intra-female mate competition should reduce and perhaps vanish. And if, as we reason, increased competition for a mate helps to explain women's preferences for sexy clothing in times of crisis, those preferences should also decrease. The second aim of this study is to rule out a generalized and not just mate related increased competition among females, as an account for their preferences to outperform other women when a crisis hits, such as by the use of specific clothing. That is, if a generalized female-female competition drives women's willingness to "dress to impress" in times of crisis, when women are primed with an abundant supply of men with resources their preferences for sexy clothing should not decrease.

Method

Seventy-one volunteer female students were randomly assigned to one of three experimental conditions (economic crisis and male scarcity, economic crisis and male abundance, and economic crisis condition).

Participants were told that they would participate in several unrelated studies. First, they completed a selective recall task, designed to induce an economic crisis state, followed, similarly to Study 1, by an economic uncertainty manipulation check. The economic crisis manipulation task was presented as a study on visual imagery. Participants were asked to recall and describe as vividly as possible the recent and current economic evolution in the country.

Next, participants completed a "news identification" task designed to induce a male abundance [scarcity] state, as in Studies 1 and 2. Participants were presented a news headline and they judged to which media it belonged. Participants read:

“Current statistics suggest that for every 100 women looking for a partner there are 201 single men in a good [tight] financial situation who are looking for female mate.” Participants in the economic crisis group read a news headline on a tennis game. Then all participants indicated to which newspaper the item most likely belonged. Lastly, all of the women performed the same shopping task as in Study 1.

Results

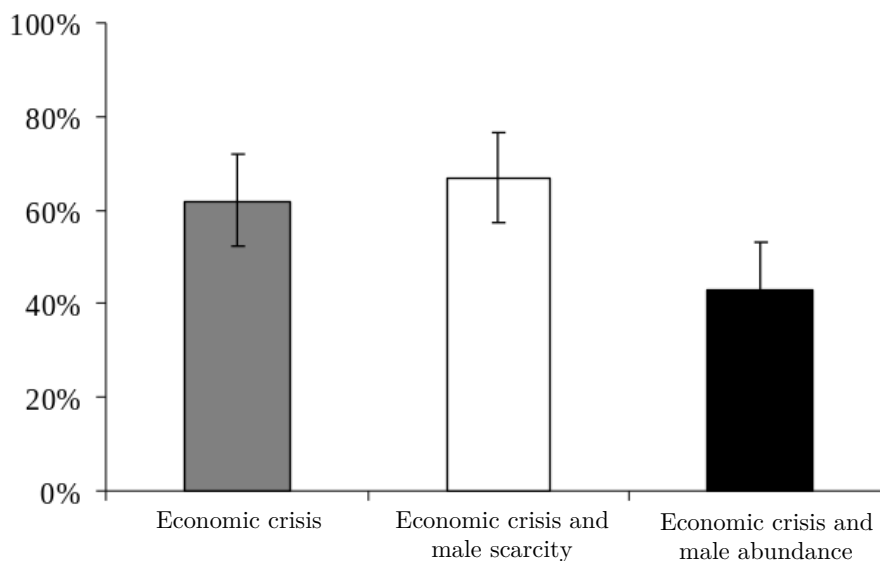
A content analysis of the reported events revealed that all participants in the crisis condition referred to a greater or lesser extent to the economic downturn that hit the country and referred to it as still unsolved. The manipulation check confirmed that participants in all three crisis conditions perceived the economic situation similarly (M crisis-male abundance = 2.52, SD = .99, M crisis-male scarcity = 2.46, SD = 1.10, M crisis = 2.63, SD = .87, $F < 1$). As in Study 1 the number of sexy products was converted into a percentage score. The results of an ANOVA revealed a significant effect of the economic situation and male availability on women’s preference for sexy clothing ($F(2, 68) = 6.72$, $p = .002$, $\eta^2 = .14$; see Figure 4.3). Participants in the economic crisis and male abundance condition were less to purchase the sexy items ($M = .43$, $SD = .26$), compared to participants in the crisis and male scarcity condition ($M = .67$, $SD = .22$), as well as participants in the crisis condition ($M = .63$, $SD = .21$). Importantly, differences between participants in the crisis and crisis with male scarcity conditions were not significant ($F < 1$).

Thus the findings of this study suggest that an underlying driver of women’s preferences in time of economic crisis for items that make them appear sexier is an increased intra-female mate competition. Moreover, the findings that when women perceive male abundance in times of crisis their preference for sexy clothing decreases, rule out a generalized and not just mate related- intra-female competition as an account for these effects.

General Discussion

Across three experiments we show that under economic crises women’s preference for sexier, more revealing female clothing and fashion products soars. When an economic crisis hits women do not cut down expenses but are willing to pay more

Figure 4.3: Percentage of sexier products chosen as a function of the economic situation and intra-female competition (study 3)



Note. Error bars indicate +/- 1 SE of Mean.

to “dress to impress.” This revealed willingness to pay for sexy clothing is paradoxical given the economic crisis environment and a new finding. It is in line with previous research that suggests that mating motives elicit strategic costly signals (Griskevicius et al. 2007, 2011). Importantly, we find that self-esteem or mood repair does not account for these results. Interestingly, enhanced sensitivity to intra-female competition helps explain female’s increased desire to enhance their physical attractiveness during economic downturns. The results were obtained among young females, who should have less traditional role-values. Despite that, we found consistent effects across samples and methodologies. This builds confidence in the fundamental, perhaps automatic, nature of the link between economic downturns and female mating motivations that this study identified.

Our findings point to the value of complementing marketing studies about consumer decisions in times of economic crisis with implicit measures of basic human motivations, such as mating desire, rather than inferring their behavior just from their economic motivations and resource scarcity. More importantly, our results reveal the importance of evolutionary consumer behavior on explaining individuals’ judgments and decisions in times of economic recession. We speculate that environmental factors like resource availability or uncertainty may be strongly connected with basic human needs, such as the need to mate or the need for control.

It thus seems relevant in follow-up research to further test the influence of resource scarcity versus abundance and how these differentially influence consumer basic motivations and decisions. This may also follow up on calls for more research on the influence that the choice environment has on mating-related judgments and choice behavior (Lenton, Penke, Todd, and Fasolo 2011).

To promote spending and increase sales as consumption shrinks during economic recessions, companies and marketers tend to target the financially struggling or uncertain consumer by reducing prices and increasing economic and financial incentives (Kasriel 2009). Our studies imply, however, that rather than merely focusing on consumers' financial needs, understanding and tackling consumers' basic needs may more effectively activate consumers' spending.

Our research has several limitations, which can lead to future research. First, we conducted our studies among young consumers who face resource uncertainty but may not face actual economic hardship or resource scarcity. Survival or future subsistence may not be a major concern for them. This may impact the link between economic crises and enhanced mating desire, and make it stronger in the current context than in regular contexts in practice. Moreover, given our young samples mate attraction and not mate maintenance is likely to help explain our findings. However, given that we did not measure relationship status we cannot disentangle the effects of mate attraction and mate maintenance on women's preference for sexy clothing in times of crisis. Future research may test this ideas experimentally or cross-culturally.

Second, our experiments focused on a particular set of female judgments and mating strategies (sexy clothing and intra-female competition). There may be very different mating strategies (e.g. sexual openness) and mate preferences (characteristics of a long-term versus short-term potential mate) in times of economic contraction, and follow-up research may investigate these. For instance, although female models who accentuate their bodies are found to be more attractive as sexual partners, it appears that then they are considered less attractive as marital partners (Hill, Nocks, and Gardener 1987). Future research may examine why this occurs, and what the implications for marketing, such as advertising themes, are.

Third, as indicated in the introduction, in this essay we focused our attention on women's strategies to attract a mate in times of crisis. Yet, understanding the effect of economic downturns on male's mating desire and mating strategies, as well as exploring gender differences, is also important to deepen our understanding on consumer responses to economic crisis. Following previous research

we can expect that men's mating preferences adapt to socioeconomic conditions. For instance, in times of low environmental security men's preferences for specific female physical characteristics, such as body mass index or age, differ from those preferred in times of prosperity (Pettijohn II and Tesser 1999; Pettijohn II, Sacco, and Yerkes 2012; Swami and Tovée 2012). In particular, extensive research posits that when economic conditions are difficult, older, heavier and taller women, with larger waist-to-hip ratios and smaller bust-to-waist ratios, as well as smaller body mass index values are preferred (see Pettijohn II and Jungeberg (2004) for a review). The reasoning behind this preference switch is the idea that different socioeconomic conditions lead men to search for female characteristics that signal specific benefits, such as capacity to help them collect and protect resources (the so called "Environmental Security Hypothesis"). However, recent research has critically revised the Environmental Security Hypothesis and provided evidence contrary to the idea that in times of economic threat males direct energy to survival rather than to reproduction (Webster 2008). Thus, it is not yet clear how economic crises affect male mating preferences. Furthermore, research has not yet examined whether other attributes than physical features (e.g. status) may dominate mens mating preferences in times of crisis.

In sum, this research has shown that economic downturns elicit female mating desires and competition among females for mates. This lead to increased preferences for sexy clothing and to a higher willingness to pay for this type of products.

Chapter 5

Conclusions and Directions for Future Research

In a recent guest editorial of the *Journal of Marketing*—“Is Marketing Academia Losing Its Way?”—Reibstein, Day, and Wind (2009) call for: “academics must improve their understanding of the changing environment, including the current global financial crisis and recession, [...] and the diminished consumer confidence in a “hot, flat, and crowded world.” Likewise, the Marketing Science Institute includes among its 2010-2012 research priorities¹: “Identifying Opportunities Arising from Economic Conditions: How can firms improve their understanding of the impact of economic conditions [...] on market opportunities?” In line with these calls, the purpose of this dissertation was to contribute to understanding consumer responses to economic crisis and the psychology behind them. To attain this objective I explored whether, and if so why, economic downturns elicit consumers’ spending and saving responses other than immediate economization. An overview of the empirical chapters and studies performed in this dissertation is presented in Table 5.1.

Underlying all the empirical chapters is the notion that consumers may respond to an economic downturn both by decreasing their spending and discretionary saving as well as by spending more, when such behaviors help them satisfy basic human needs activated by the crisis. These findings are in contrast with the principle that consumers are motivated to save, spend less and look for lower prices due to financial constraints, which has dominated scholars’ understanding

¹Available online at http://www.msi.org/pdf/MSI_RP10-12.pdf.

Table 5.1: Overview of Empirical Chapters

	<i>Chapter 2</i>	<i>Chapter 3</i>	<i>Chapter 4</i>
Object of Research	To understand how external uncertainty about the future financial situation may affect consumers spending and saving tendency	To address consumers' need for social connection under economic crisis and its impact on consumer spending	To examine how and why economic crises affect female consumers' preferences for sexy clothing
Questioned behavior	Spending and saving intentions, gamble choices	Social connection desire, and "we" vs "I" fast moving consumer good choices and willingness to pay	Mating desire, and female fashion items' choices and willingness to pay
Methodology	Survey and experiments	Survey and experiments	Experiments
Sample type and size	Study 1: members of CentER data household panel; 979 Study 2: students; 75 Study 3a: students; 80 Study 3b: students; 88 Study 4: students; 104	Study 1: members of CentER data household panel; 1900 Study 2: students; 72 Study 3: students; 83 Study 4: students; 43	Study 1: students; 49 Study 2: students; 83 Study 3: students; 71
Data analysis	Regression analysis, ANOVAs, Logistic Regression, Chi-Square Analysis	Regression analysis, ANOVAs	Regression analysis, ANOVAs, Logistic Regression
Key findings	Results indicate that feelings of uncontrollable uncertainty about the future financial situation elicit a wait-and-see mode and this blocks not only consumers' major spending decisions, but also their saving decisions. Focusing consumers on the future regrets of current inaction is a remedial strategy	Results suggest that economic downturns arouse the need for social connection, which leads to an increased willingness to pay for products and brands that are positioned to satisfy this need for social connection, even when these underperformed on quality	Results show that driven by mating desire and intra-female competition, women choose and are willing to pay more for sexy clothing rather than more conservative clothing when made aware of the economic crisis

of consumer responses to economic downturns (Ang 2001; Zurawicki and Braidot 2005).

In particular, the findings from Chapter 2 showed that economic crises prompt feelings of external uncertainty, which then lead to an inaction tendency and hence reduced spending on consumption and discretionary saving. Interestingly, consumers “stop” even if they are not personally hurt by the potential future losses or when the future only holds potential gains. Such a finding has the potential to make a theoretical contribution to the uncertainty literature as well a contribution to the public policy and economic crisis area, highlighting how external uncertainty about the future financial situation can shape people’s motivations and decisions.

In the psychology of consumption, prior research has investigated the role of external uncertainty feelings (such as uncertainty about life and death, existential uncertainty, or uncertainty about life outcomes) in shaping consumers’ experiences, judgments and choices. There is evidence that uncertainty about life and death often leads to greater consumption of indulgent things and increased materialism and spending (Ferraro, Shiv, and Bettman 2005; Kasser and Sheldon 2000). Likewise, Gao, Wheeler, and Shiv (2009) have shown that when the self is threatened people tend to consume more to restore their sense of self. Recently Cutright (2012) has also revealed that when personal control is threatened, consumers increase their spending seeking for structure in consumption. That is, prior research suggests that uncontrollable uncertainty feelings can lead to increased consumer spending. In contrast, findings of Chapter 2 suggest that external uncertainty prompted by a crisis induces a tendency to refrain from action, to wait-and-see, and hence spending and discretionary saving decreases. Spending actions and discretionary saving decisions represent commitment and giving up control over financial resources. For that reason, when the source of the external uncertainty is related to consumers’ financial situation, it seems reasonable to speculate that giving up financial resources further increases consumers’ feelings of uncertainty rather than help them repair. Thus, this research adds to previous uncertainty literature by showing that when the source of the external uncertainty is related to the economic environment, it brings people in a fundamental inaction mode, and leads to lesser rather than greater spending and discretionary saving.

For policy makers and marketers, these findings suggest that uncertainty feelings lead to immediate reduced spending on consumption and lower levels of discretionary saving but increased levels of residual saving. If these speculations

match short-term responses to economic uncertainty, consumers may accumulate more assets in current and short-term saving accounts to keep these available for immediate consumption once the dust settles, rather than (actively) placing them in long-term saving accounts for much later use. If this would be the case and the hurdle to spend from (short-term) residual saving accounts is lower than to spend from (long-term) precautionary ones, additional opportunities arise for marketing and government policies to assist consumers in starting to spend again. On the other hand, if the aim is to increase (long-term) saving rates, activating consumers' anticipated regret of missing out on (here) saving opportunities may prove effective if the assets are still deemed residual.

In addition, the findings of Study 1 of Chapter 2 provide some insights about theories of consumer confidence and consumption. The Index of Consumer Sentiment in its aggregate form is widely used to gauge trends in consumer confidence and predict demand of durables (e.g., Carroll, Fuhrer, and Wilcox 1994; Howrey 2001; Winer 1985). However, the results of Study 1 of Chapter 2 show that the four key items that form the index have distinct effects on uncertainty levels, and consumption and saving inclinations in disaggregate analyses. Although the perceived general economy and appraisals about the future personal financial situation had no effect here, appraisals of the past personal financial situation did so, even after controlling for uncertainty feelings. Thus, our results imply that when examining and explaining consumer reactions at the individual level, combining cognitive appraisals of the general economy and personal financial situation with direct measures of consumers uncertainty feelings in disaggregate models, may enrich theories of consumption and saving decisions. This suggestion is in line with previous studies that scrutinize the methods used to produce consumer confidence indices (for a review, see Ludvigson 2004).

Although Consumer Sentiment belongs to the domain of "macro economic psychology" (van Raaij 1984), researchers have also been interested in understanding how household spending connects to it. In this sense, previous studies on how Consumer Sentiment relates with household saving and spending lead to divergent findings depending on the macro-level (e.g. Carroll, Fuhrer, and Wilcox 1994; Bram and Ludvigson 1998) or micro-level (Souleles 2004) data used. Ludvigson (2004) noted that this discrepancy between the micro-level and macro-level results may be attributable to some sort of aggregation bias. That is, the aggregate analyses in earlier economic studies may be prone to aggregation bias where at the aggregate (macro) patterns exist that may not be present or even be reversed

at the disaggregate (micro) level. For instance, Dominitz and Manski (2003) examined how consumer confidence should be measured and the micro foundations of the Michigan Survey of Consumers, and they concluded: “[...] we suggest that the producers of consumer confidence statistics prominently report their findings for separate questions. The responses to separate questions are much more readily interpretable than are monthly reports of an index constructed from disparate, non-commensurate elements. We do not go so far as to suggest a halt to reports of indices; simple summaries of masses of data often are a practical necessity. However, we do think it long overdue to reconsider the particular structure of the ICS and similar indices” (p. 25).

Taking the findings of Chapter 2 one step further, I conjecture that the results provide some suggestive evidence that consumers are myopic decision makers (Kahneman and Tversky 1984) in times of economic crisis. That is, consumers seem to be gazing through “short-sighted lenses” in times of crisis, which cause the image they see when looking at a distant object (future decision) to be out of focus. Thus, consumers show a short term orientation when dealing with their needs and spending and saving decisions during tough economic times. Although this idea remains to be explored and is to some extent speculative, our findings and recent research suggest possible connections with prior empirical research. Results of Study 4 of Chapter 2 showed that in times of crisis people’s most recurrent regrets involved unfortunate outcomes of actions taken (action regrets) rather than from actions foregone (inaction regrets). Given that actions cause more regret in the short-term but inactions are regretted more in the long run (Gilovich and Medvec 1994), these findings point towards consumers’ short-sighted temporal perspective under economic crisis. Moreover, recent research by Millet, Lamey, and Van den Bergh (2012) suggests that economic downturns motivate individuals to avoid losses, but not necessarily to achieve gains. Interpreting this research in light of previous studies that show how consumers tend to be prevention focused in the near future and promotion oriented for distant future events (Theriault, Aaker, and Pennington 2008), their results also converge with a “shortsighted-glasses” effect.

As a first exploratory test of this speculation, we examined whether indeed the metaphor of gazing through “short-sighted lenses” holds and hence people literally view the image they see when looking at a distant object to be out of focus. We primed 37 participants with a crisis (control) scenario and then in a second unrelated task they saw the typical eye-chart used by opticians to test

peoples eyes, and asked them to estimate at which distance they could comfortably and clearly see a certain line (measured in a 9-item scale, from 0.5 meters until 4.5 meters). Results suggest that, as speculated, in times of crisis people see more out of focus when looking at a distant object compared with the control group (M crisis = 2.08, M control = 2.75; $F(1, 35) = 4.25$, $p = .047$). If this would be the case and consumer myopia prevails in times of crisis, tough economic times may prompt biased consumer decisions such as paying more attention to up-front costs than to delayed costs (Hausman and Joskow 1982) or not considering the adds-on (Gabaix and Laibson 2006).

Whereas the results of the first two studies of Chapter 2 suggest that in times of crisis consumers mostly decrease their spending due to the wait-and-see mode, the last study of Chapter 2, as well as the combined findings of Chapter 3 and Chapter 4 imply that this tendency can also be broken. On the one hand, results of Study 4 of Chapter 2 suggest that making consumers focus on the future negative emotional consequences, such as regret, of their inaction can help them overcome their inaction tendency and lead them to spend more in times of crisis. Prior research, such as Loomes and Sugden (1982, 1987), has already suggested that regret theory may help explain choices under uncertainty. Besides, research has also examined the link between inaction inertia and anticipated regret. In particular, Tykolinski and Pittman (1998) showed that when an attractive action opportunity has been forgone, inaction inertia occurs to avoid anticipated counterfactual regret. Our research adds to this literature by showing that under uncertainty anticipated inaction regret can lead consumers to act. In accordance with our findings, studies in the field of preventive medicine suggest that anticipated action regret leads to higher intentions to vaccinate (Ziarnowski, Brewer, and Weber 2008; Chapman and Coups 2006).

On the other hand, the findings of Chapter 3 and Chapter 4 suggest that economic downturns also affect interpersonal motivations, such as the desire for social connection and the mating desire, which then affect consumer choices accordingly. That is, contrary to the literature which indicates that there is a direct relationship between economic downturns and consumers' search for lower prices and decreased expenditures (Ang 2001; Katona 1975), the results of the last two empirical chapters point out that when products satisfy needs prompted by the crisis they can also evoke an increased willingness to pay.

As Lamey et al. (2012) conclude: "managers cannot prevent economic contractions from happening. However, they can mitigate or attenuate the impact they

feel from macro-economic developments” (p.33). In line with this idea, taken together, our results provide marketers with valuable information on the importance of considering new branding and communication messages to marketing throughout a crisis, which may directly target new spending motives elicited by the crisis (Quelch and Jocz 2009). Although some empirical analyses support the existence of higher prices during contractions (see e.g. Backus and Kehoe 1992; Rotemberg and Saloner 1986; Rotemberg and Woodford 1999), enabling consumers to economize is a traditional marketing tactic used by companies to appeal to crisis-hit consumers (Williamson and Zeng 2009). Yet, conventional approaches of focusing on economic incentives to stimulate the economy have the risk of slowing economic growth further if falling prices and retailer promotions lead consumers to delay purchases in the expectation of additional promotions and price cuts. Our findings suggest alternative ways to effectively market products in times of crisis. In particular, when consumers are waiting until the dust settles, increased levels of advertising in industries as a whole may help to signal regained corporate trust in the economy and in the consumer, in similar ways as increased advertising levels of individual brands signal product quality (Kirmani and Wright 1989). This way, feelings of environmental uncertainty may diminish and hence also consumers’ spending inaction. In a similar fashion, individual brand advertising may directly focus on the uncertainty feelings that account for consumption postponement, as well as on connectedness and mating motives that promote increased spending under economic crisis. This recommendation converges with previous findings suggesting that “shifts from advertising to price efforts are not recommended for all product types” (Gijzenberg et al. 2009, p. 24).

Findings of Chapter 3 and Chapter 4 also help to deepen the relationship between economic environmental factors, psychology, and behavior. Arguably, environmental factors like resource availability or uncertainty may be strongly connected with basic human needs. For instance, within terror management theories, previous research already suggests that close relationships may work as a death-anxiety buffering mechanism (Mikulincer, Florian, and Hirschberger 2003). As such, Chapter 3 showed that when economic crisis hits, the need for connectedness increases and thus consumers develop a higher preference and willingness to pay for products and advertisements that signal social connectedness (such as images of people or product popularity appeals). In addition, Chapter 4 showed that women’s mating desire rises under economic crisis, and hence women have a stronger preference and a higher willingness to pay for sexy (rather than more

conservative) clothing when tough times hit. Hence, these findings speak about the importance of evolutionary consumer behavior on explaining individuals' judgments and decisions in times of economic recession.

All in all, the three chapters also provide some hints about distinct motivational orientations that may be endemic to economic crises but conflict with each other: approach-avoidance motivations. On the one hand, Chapter 2 shows that consumers try to avoid making a mistake when a crisis hits, which leads them to avoid action. Yet, our findings also suggest that consumers try to avoid not taking an opportunity when reminded of inaction regret in times of crisis, which leads to avoid inaction. Based on these results, it does not seem unreasonable to speculate that while an avoidance motivational orientation may prevail in times of uncertainty, consumers may face an avoidance-avoidance conflict between active and passive avoidance motivations. Findings of Chapters 3 and 4 also imply that people want to avoid making mistakes (actions). Yet, they also show that people want to approach others and bond (Chapter 3) as well as approach potential mates and mate (Chapter 4). Thus, findings of these two chapters may also point to a motivational conflict, in this case an approach-avoidance motivational conflict. If this would be the case and consumers experience motivational conflicts when crisis hits, consumers may respond, for instance, by choosing extreme alternatives or making counter-normative choices in times of crisis.

Directions for Future Research

The chapters in this dissertation provided new insights about the way consumers respond to economic crisis, highlighting some mechanisms that may lead consumers to decrease discretionary savings or increase spending in times of economic downturn. However, much is still to be known to better understand consumer responses to economic crisis. In this section, I touch upon some additional research avenues to deepen the understanding about consumer behavior under economic crisis.

A first area that is worthy of research attention is the conditions under which consumers will show each of the differential responses to economic crises we described. Our studies suggest that most participants under economic crises preferred products with reminders of social cues and women had a preference for

sexier clothing. Moreover, our findings also illustrate a general attitude to postpone decisions and “wait and see” when a crisis hits. One possible answer to why economic crises may produce such different behavioral responses relates to the particular needs that are threatened and the means by which people attempt to repair those needs. However, the primes we used in our studies were, by and large, similar across essays, and hence there is no a priori reason to think that a different need was threatened in each subset of studies. Thus, it seems reasonable to hypothesize that uncertainty about the future financial situation heightens multiple needs. In this instance, the dominant response may be a function of what need-bolstering opportunities a consumer has at the moment. In our studies, participants were only given one need-boosting opportunity at a time. Hence, our research cannot explain the underlying processes and reasons for specific consumer reactions in each instance. Yet, in real life consumers are likely to have the opportunity to satisfy different needs in a certain moment.

An important question yet to be answered is then: what determines which of the different motivations drives consumer behavior in a recession? A factor that may help explain this question refers to individuals’ regulatory focus (e.g., Higgins 1997; Molden, Lee, and Higgins 2008) and goal-pursuit mode. When a crisis hits, a prevention motivational system prevails among consumers (Millet, Lamey, and Van den Bergh 2012). Yet, when aiming at safety and security consumers can pursue to insure against errors of commission (avoidance) but also to insure protection (approach). Thus, different approach and avoidance strategies may be used in the service of the same general prevention goal (Higgins, Roney, Crowe, and Hymes 1994). Thus, a useful direction for future research is to focus on understanding the particular conditions that contribute to the different consumer reactions in times of crisis.

A second area that is worthy of research attention is the influence of specific emotions prompted by economic crisis on consumer decisions and choices. The findings presented in Chapter 1 showed that economic downturns trigger feelings of uncertainty, which shape consumers’ spending and saving tendencies. Likewise, global consumer confidence levels are widely used to examine consumer spending trends. Yet, research on emotion specificity suggests that emotions with different appraisals have different effects on judgment and decision making (Baumgartner, Pieters, and Bagozzi 2008; Lerner and Keltner 2000; Lerner and Keltner 2001; Smith and Ellsworth 1985). In that sense, external uncertainty can elicit multiple specific emotions. On the one hand, economic downturns could induce different

emotions, all with a similarly high level of uncertainty but a divergent level of other appraisal dimensions (such as control or responsibility). For instance, consumers experiencing a high uncertainty level and a prevention focus may feel fearful in times of crisis while consumers experiencing a high uncertainty level but a stronger promotion focus may feel hopeful under economic crisis (Moulard, Kroff, and Folse 2012). Importantly, these two emotions have divergent motivational implications. Fearful consumers are likely to take action to avoid potentially harmful behavior (Passyn and Sujana 2006) and express pessimistic risk estimates and risk-averse choices (Lerner and Keltner 2001). On the contrary, hopeful consumers are more likely to feel positive and take action to achieve potentially favorable behavior (MacInnis and de Mello 2005). That is, in times of crisis fearful and hopeful consumers are likely to show divergent spending and saving patterns.

What is more, depending on perceptions of agency, external uncertainty could also elicit feelings of sadness, anger, or guilt. For instance, if consumers perceive bankers and financial institutions as responsible for the current crisis, they are likely to feel angry. But when consumers perceive circumstances beyond human control to be the cause of the crisis they are more likely to feel sad and guilty if they perceive themselves to be the cause of their misfortune (Ellsworth and Smith 1988). Then, these three specific negative emotions of a pessimistic mood are likely to influence differently consumers' judgments and decisions (Keltner, Ellsworth, and Edwards 1993). Previous research already suggests that specific U.S. recessions and slowdowns could have been a response not to shifts in fundamentals, but to switches in waves of pessimism (Chauvety and Guo 2003). Yet, to date it is still largely unclear the impact of specific consumer emotions on economic crisis initiation, duration or consumer behavior. Individual socio-economic characteristics, and country specific economic policies and cultural factors are likely to influence the specific emotional outcomes generated by uncertainty feelings. Thus, in the present studies the variability of emotional outcomes may not have played a role given the socioeconomic and cultural similarities of our samples. Therefore, research on the specific affects experienced by consumers in times of economic crisis and how their specific components shape consumer reactions would provide useful insights and guidelines both for policy makers and firms.

A third area that is worthy of research attention in marketing is the role of media coverage and content in starting and ending economic crises and in shaping consumer responses. In all three chapters we found that fairly simple manipulations by means of news items with varying content immediately influenced

economic appraisals, uncertainty feelings and consumption and saving decisions. Previous research on the impact of media bias on domains such as voting (DellaVigna and Kaplan 2007) or financial markets (Engelberg and Parsons 2011) has already shown that media coverage can strongly affect individual and firm decision making. In particular, given previous research that describes herd behavior in financial contexts (Gärling, Kirchler, Lewis, and van Raaij 2010) we can speculate that economic sentiment and uncertainty are prone to imitative social influence. The reasoning behind it is that the less are able individuals to form their own judgments in an informed manner, the more likely they are to conform to others' judgment. That is, a consumer is more likely to hold an optimistic (pessimistic) expectation about the economic prospects if his peers do. Likewise, building on research in social psychology showing that individuals who are exposed to the same emotional event emotionally assimilate to each other (Fischer, Rotteveel, Everm Manstead 2004), even emotional reactions to a crisis may turn a collective phenomenon if they are publicly exposed. Additionally, even behavioral reactions are likely to be subject of contagion and become a collective phenomenon. As van Raaij (1984) noted aggregation is not simply a summation of individual properties. People take the behavior of others into account and adapt their own behavior. Thus, media coverage may play an important role in individual's assimilation of economic appraisals, uncertainty feelings, specific emotions and even behavioral reactions.

Arguably, media coverage of economic crisis does not seem free of biases. For instance, in a recent survey conducted by a research firm among 100 top members of the business and financial media,² two-thirds of financial journalists said the news media “dropped the ball” in the period before the current crisis became apparent. But once the economic situation showed some signs of improvement—and the political fights over legislative action subsided—media coverage began to diminish³ (The Project for Excellence in Journalism 2012). For instance, after accounting for 46% of the overall news coverage in February and March 2009, coverage of the economic crisis dropped by more than half (to 21% of the newshole studied) from April through June. And in July and August, it fell even further

²Available online at http://www.abramsresearch.com/static/guides-whitepapers/ar_finacial_survey.pdf.

³Available online at http://www.journalism.org/analysis_report/covering_great_recession.

(to 16%). Yet, to date it is largely unclear how media coverage and content influences consumer responses to economic crisis. In view of this, specific research on the issue, using high-frequency panel data of consumption behavior may present valuable information both to marketers and policy makers for dealing with the effects of media biases about economic downturns and thus for avoiding self-fulfilling prophecy effects or for promoting economic expansions.

A fourth area that is worthy of research attention is the effect of environmental uncertainty about the future financial situation on consumer judgments and decisions. Whereas much is known about internal uncertainty as well as about the role of existential uncertainty feelings (such as uncertainty about life and death, or uncertainty about life outcomes) on consumer decisions (Kasser and Sheldon 2000; Ferraro, Shiv, and Bettman 2005; Gao, Wheeler, and Shiv 2009), little is yet known about the effects of environmental uncertainty of the financial situation on consumers' judgments and decision making. While consumers usually engage in current actions to attain positive and avoid future negative outcomes, these outcomes are difficult to appraise in a financially uncertain environment. For that reason, as results of Chapter 2 suggest, findings of previous research about the role of external uncertainty feelings on consumer judgments may not generalize to uncertainty related to financial outcomes. Importantly, uncontrollable uncertainty feelings about financial outcomes may not only be elicited by economic downturns, but also by other events such as economic policy changes, shifts in financial markets, or variations of taxation rules. The recurrence of such contexts highlights the need for additional research on how specific external uncertainty feelings related to financial outcomes influence consumer judgments and decisions.

A fifth area that is worthy of research attention is the cross-national analysis of consumer responses to economic crises. That is, the socioeconomic and cultural similarities between our samples may hide differences among consumers based on socioeconomic needs or cultural patterns. We conducted our studies among consumers in cultures with extensive social security provisions and defined-benefit pension plans. This may have affected the way uncertainty feelings influence active precautionary saving or investing as well as increased willingness to pay. Moreover, the studies were conducted in countries with low personal-loan and credit rates, and hence repayment of credit was not examined as a type of saving. However, given that economic downturns boost credit repayment (Gärbling, Kirchler, Lewis, and van Raaij 2010), considering repayment of credit as a type of saving and analyzing how feelings of economic uncertainty shape saving behavior in countries

with high versus low personal credit levels could enrich our findings. Furthermore, recent research has shown that countries vary in gender parity (measured with the Global Gender Gap Index) and these differences affect mate preferences and strategies (Zentner and Mitura 2012). Accordingly, testing the findings of our studies on female mating desire and clothing preferences in times of crisis across countries with different Global Gender Gap Indexes would provide additional insights about consumer responses to economic downturns. Summarizing, further cross-cultural and cross-socioeconomic research may provide additional insights about consumer responses to economic crises.

A final area that is worthy of research attention is the comparison between consumer behavior in a recession and in an expansion. Our studies explored how consumers respond to recessionary times by comparing the behavior of consumers exposed with a crisis scenario to a control condition. However, another way to explore consumer reactions to economic downturns is to compare how consumers behave during recessionary and expansionary cycles. Including a third condition that reflects an “economic upturn” would allow to examine how business cycles shape consumer behavior. Initially, we also considered this three condition approach but we failed to successfully prime an economic boom. The prime we used read as follows: “Hopeful news of the IMF: The recession is over. The International Monetary Fund (IMF) reports reveal that the Dutch economy has shown a clear improvement this. The IMF also notes a decline in the unemployment rate. This is especially good news for newcomers to the labor market. Likewise, the Dutch Central Planning Bureau (CPB) also predicted a clear upward trend of economic growth for next year. The reports of both institutes clearly indicate that the financial crisis has been solved. Finally it looks that the recession is over in the Netherlands.” The manipulation checks included in the study showed that our economic expansion scenario lead participants to be in a crisis mindset rather than in an economic boom mindset. One possible explanation for the failure of our manipulation is the difficulty to communicate something formulated as the negation of its opposite. That is, for instance, to communicate an economic expansion by talking about the end of the recession. Nonetheless, recent research by Millet, Lamey and Van den Bergh (2012) has successfully included an expansion scenario in their studies about consumer reactions to business cycles. In particular, in their expansion scenario, “the news bulletin reports that economic growth persists: There are plenty of jobs, stock markets are rising, purchasing power increases,

etc. The scenario continues describing their search for a job in this economic climate” (p.278). Similarly, Rodeheffer, Hill, and Lord (2012) successfully primed economic abundance using analogy problems, which contained words representative of resource abundance. That is, they avoid any reference to the recessionary cycle, which converges with the reasoning behind the failure of our primes. Thus, another area that is worth future research attention is the analysis of consumer reactions during recessionary and expansionary business cycles.

“When the going gets tough the tough get going,” may also hold in times of economic crisis. That is, as claimed by an old Chinese proverb that suggests that within every crisis awaits opportunity, these can be fruitful times for research to gain new insights on consumer behavior under hardship and threat. Aside from these benefits, I hope that the findings of the present thesis contribute to find the way out of the current “Great Recession.”

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