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How Financial Constraints Influence Consumer Behavior: An Integrative Framework

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Financial constraints are economic limitations on behavior. Given that millions of people experience chronic or episodic financial constraints, we sought to review research that provides insight into how they affect consumer behavior. We propose an integrative framework that draws insights from multiple literatures that have examined financial constraints from different perspectives. The framework distinguishes between four *perspectives*, which are rooted in literatures on resource scarcity, choice restriction, social comparison, and environmental uncertainty and highlights different temporal *stages of responding* to financial constraints, distinguishing between reacting, coping, and adapting. Beyond the obvious negative effects of financial constraints, our framework emphasizes consumer resilience, highlighting that consumers often successfully cope with and devise adaptive strategies to deal with financial constraints. By broadening the behavioral and temporal scope of financial constraints considered within consumer psychology, this framework helps us to understand the often strong and sometimes counterintuitive effects of financial constraints on consumer behavior.

Keywords Financial constraints; Resource scarcity; Choice restriction; Social comparison; Environmental uncertainty

Introduction

Each day, many consumers experience financial constraints, which impose economic limitations on their behavior and restrict desired consumption (Tully, Hershfield, & Meyvis, 2015). Millions of people live in chronic poverty or experience episodes of financial constraints (www.worldbank.org; Basu, 2014). Even people who would be considered middle- or upper-class experience subjective financial constraints. For example, 25% of people in the United States making over $100,000 per year say they often feel financially constrained (Huffington Post, 2015), and 27% of this group say they cannot afford to buy everything they really need (Schor, 1998).

Given the prevalence of both objective and subjective financial constraints, it is important to understand how such constraints influence consumer behavior. Empirical data shows that being poor is associated with many negative life outcomes, such as lower levels of educational attainment, poorer health, and worse human welfare outcomes (Belle & Doucet, 2003; Kawachi & Kennedy, 1999; Phillips & Chin, 2004). But we have less insight into the more proximate effects of financial constraints on consumer behavior. In part, this may be because the effects of financial constraints on behavior have been examined in several different ways across several different literatures. These literatures include research on resource scarcity (Cannon, Goldsmith, & Roux, 2018; Shah, Mullainathan, & Shafir, 2012), choice restriction (Botti et al., 2008), social comparison (Kraus, Piff, & Keltner, 2009) and environmental uncertainty (Chen & Miller, 2012). To illustrate the diversity of methodologies employed, some studies experimentally induce financial constraints, whereas others

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measure chronic constraints; some studies operationalize financial constraints as absolute income, whereas others focus on relative standing; some focus on financial constraints in childhood, whereas others focus only on adulthood.

The diversity of literatures and methods examining the effects of financial constraints on consumer behavior speaks to its profound effects on consumers, but it also paints a muddy picture due to the many differences in study methods and foci. To our knowledge, there is no existing framework of the effects of financial constraints on consumer behavior that spans these literatures. In hopes of conceptually organizing these literatures and spurring future research, we propose an integrative framework suggesting that consumers' experience of financial constraints can be represented by two key dimensions. The first dimension reflects the perspective or focus of each literature. Literature on resource scarcity considers how financial constraints shift the consumer's attention to money (Mullainathan & Shafir, 2013) and change the way they use this scarce resource (Shah et al., 2012). Literature on choice restriction focuses on how financial constraints limit consumption of products and services that consumers need or want (Botti et al., 2008). Literature on social comparison emphasizes the role of financial constraints in shifting consumers' motivations (Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007) and attention to other people (Piff, Kraus, Côté, Cheng, & Keltner, 2010). Finally, literature on environmental uncertainty suggests that financial constraints shift the way consumers interact with their environment (Mittal & Griskevicius, 2014). Examining similarities and differences across these literatures furthers our understanding of how financial constraints will influence consumer behavior.

The second dimension reflects the sequence of stages through which consumers respond to financial constraints: (a) *reacting*, (b) *coping*, and (c) *adapting*. When consumers first encounter a financial constraint, it forces them to *react* to the new challenge created by the constraint. Consumers soon begin to *cope* with this challenge by working within the constraint. Over time, consumers *adapt* to the challenge by attuning to specific constraints. These stages roughly reflect immediate reactions, short-term solutions, and long-term adaptations. A strength of the current framework is that consumers' responses to financial constraints seem to progress through similar stages regardless of whether the focus is on resource scarcity, choice restriction, social comparison, or environmental uncertainty.

Beyond the obvious negative effects of financial constraints, our framework emphasizes consumer resilience, highlighting that consumers often cope with and devise adaptive strategies to deal with financial constraints. People often suffer negative consequences as they encounter financial constraints. But many consumers are able to cope with these constraints and employ strategies that help them navigate within these constraints. In this sense, our framework is a notable departure from the typical focus on the negative effects of financial constraints. We do not suggest that financial constraints are good; however, we highlight that many consumers not only learn to manage the constraints they are facing, but that they often devise adaptive strategies to deal with such constraints (Payne, Bettman, & Johnson, 1993), making the best of an otherwise difficult situation. For example, although resource scarcity can produce negative effects such as taxing cognitive bandwidth (Mani, Mullainathan, Shafir, & Zhao, 2013), it can also encourage consumers to become more efficient with their resources (Mullainathan & Shafir, 2013) and less susceptible to several decision biases (Shah, Shafir, & Mullainathan, 2015).

In the following sections, we delineate in more detail the four literatures' perspectives on financial constraints and the three stages of responding to these constraints. We then provide a guided review of the four perspectives on financial constraints by examining each literature through the lens of the three stages of consumer response. Based on this review, we highlight unanswered questions and opportunities for future research. By broadening the behavioral and temporal scope of financial constraints considered within consumer psychology, we hope that this framework helps us understand the often strong and sometimes counterintuitive effects of financial constraints on consumer behavior.

A Framework for Understanding Financial Constraints

Four Perspectives on Financial Constraints

Across the multiple literatures that have examined the effects of financial constraints on consumer behavior, researchers are not always talking about the same thing. Although these literatures share the common idea that consumers experience economic limitations on their behavior, the nature of the specific economic limitations and the specific behaviors examined vary considerably across different literatures.

A closer examination of the literatures suggests that their perspectives or foci differ (Table 1). Each literature focuses on a meaningfully distinct object related to the experience of financial constraints. Within the literature on resource scarcity, the focus is on money; within the literature on choice restriction, the focus is on products and services; within the literature on social comparison, the focus is on how consumers relate to other people; and within the literature on environmental uncertainty, the focus is on the consumer's environment.

Resource Scarcity. Financial constraints can be characterized as a lack of resources that are required to satisfy consumers' needs or wants. At a broad level, resource scarcity reflects a real or perceived lack of capital (i.e., financial, social, cultural) or other production inputs (i.e., time) that a consumer must invest to acquire and use goods and services (Cannon et al., 2018; Hamilton et al., 2018; Roux, Goldsmith, & Bonezzi, 2015). Because the most typical experience of resource scarcity for consumers involves a perceived lack of monetary resources, the literature on resource scarcity has often examined financial constraints (e.g., Sharma & Alter, 2012).

Table 1
Different Perspectives on Financial Constraints

Perspective	Financial constraints. . .	Focus on	Example
Resource Scarcity	Limit availability of economic resources	Money	Shopping at a grocery store with a limited budget
Choice Restriction	Limit availability of options	Choices	Shopping at a grocery store that offers limited options
Social Comparison	Limit ability to make favorable social comparisons	Other People	Shopping at an exclusive, upscale grocery store
Environmental Uncertainty	Limit predictability of environment	Environment	Not knowing whether you will have enough money to go grocery shopping this week

When consumers encounter resource scarcity, their attention is drawn to the scarce resource (Mullainathan & Shafir, 2013). For example, money is more salient when people have a limited budget to achieve a goal or when they are chronically living with limited income. As we will discuss, this greater focus on money has several effects on consumer behavior.

Choice Restriction. Financial constraints limit consumers' ability to choose from the myriad products and services they desire (Botti et al., 2008). Because financial constraints make some options unavailable or unaffordable, financial constraints restrict consumer choices.

Choice restriction tends to encourage consumers to focus on the availability of the choice options (e.g., Brehm, 1966). Choice restriction is likely to be salient when people have small quantities of items available in a given product class, experience an imposed limitation on choices, or experience a more chronic lack of access to options. Although the choice restriction perspective has some overlap with the resource scarcity perspective, a lack of choices is not identical to a lack of money. For example, consumers do not experience shopping in a grocery store that offers only two types of fruit (choice restriction) in the same way that they experience shopping on a limited budget at a store with plentiful options (resource scarcity).

Social Comparison. Financial constraints do not operate in a social vacuum, and experiencing financial constraints limits a consumer's ability to make favorable social comparisons. Consumers have a fundamental motivation to attain status (Griskevicius & Kenrick, 2013), which leads them to be particularly attuned to how their own status compares to that of others (Corcoran, Crusius, & Mussweiler, 2011; Festinger, 1954). A recent meta-analysis showed that consumers predominantly tend to make upward comparisons (Gerber, Wheeler, & Suls, 2018), suggesting that consumers most often compare themselves to others who have more financial resources than they do.

Unlike the first two perspectives that focus on the consumer's resources or on their choices, this perspective highlights the social dimension of financial constraints, focusing on other people. This perspective is likely to be salient when consumers become aware that other consumers have more resources, either subjectively or objectively, such as when they are shopping in an exclusive, upscale grocery targeting wealthy shoppers. The social aspect of financial constraints can have powerful effects on consumer behavior by influencing how

consumers interact with others and the degree to which they consider others in their choices.

Environmental Uncertainty. Financial constraints can alter people's psychosocial environments. The experience of financial constraints is often accompanied by more frequent job changes, family disruption, exposure to violence, and more chaotic day-to-day lives (Evans, 2004; Mittal & Griskevicius, 2014). As a result, consumers who face financial constraints find themselves living in environments that are in frequent fluctuation, in which it is difficult to predict what the future holds.

Predictability is a fundamental dimension of all environments (Ellis, Figueredo, Brumbach, & Schlomer, 2009). Financial constraints reduce predictability, which creates a sense of environmental uncertainty. Environmental uncertainty is likely to be salient when the future feels uncertain, such as when there is high volatility in the stock market, the possibility of a recession, or a person simply does not know whether she will have any money to shop for groceries. However, the first three perspectives focus on one's one lack of money, lack of choices, and other people, this literature focuses on the environment in which decisions are made.

Summary. We propose that past literature has examined financial constraints from four different perspectives, each with a different focus: the resource scarcity literature has focused on limited access to money, the choice restriction literature on limited choice options, the social comparison literature on ability to make favorable social comparisons, and the environmental uncertainty literature on the predictability of the environment. We do not claim that these four literatures represent an exhaustive examination of financial constraints, and there may be other perspectives on financial constraints. However, this framework reflects our current understanding of the primary literatures that have examined the effects of financial constraints on consumer behavior. By examining these four different perspectives, we hope to gain a broader understanding of how financial constraints influence consumer behavior. For example, we expect that there will be both similarities and differences in the way financial constraints influence consumer behavior via environmental uncertainty versus via social comparison, choice restriction, or resource scarcity. In the next section, we discuss the second dimension of our framework, which considers how consumers respond to each type of financial constraint over time.

Stages of Responding to Financial Constraints

A reading of these four literatures relevant to financial constraints makes salient the dimension of time. Whereas some research is more focused on the short-term effects of financial constraints, other work is more focused on the long-term effects. These temporal differences tend to be implicit rather than explicit, with almost no research explicitly considering whether financial constraints might produce different effects over time.

We propose that when consumers face financial constraints, they follow a three-stage pattern of responding. When consumers first encounter the constraint, they *react*. The constraint creates a new challenge for them and interferes with their usual thinking or decision making. However, consumers soon begin to *cope* with the constraint. They alter their thinking and decision making in ways that help them to perform despite the constraint. Finally, if the constraint persists, over time consumers *adapt* to the constraint and it becomes a more chronic part of their thinking and decision making.

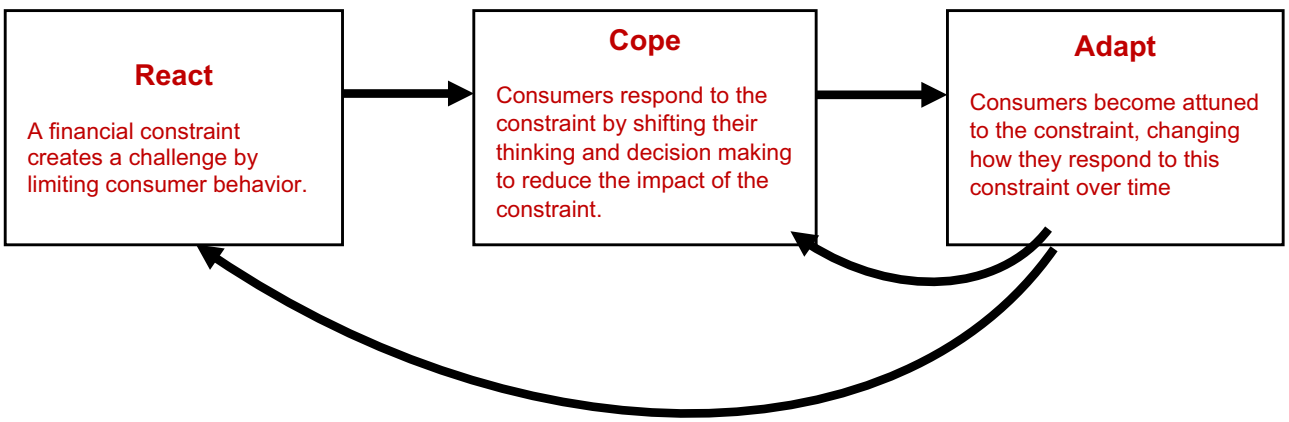

Figure 1. Stages of responding to financial constraints. [Color figure can be viewed at wileyonlinelibrary.com]

Figure 1 presents a visual overview of the three stages. When consumers encounter a financial constraint, they must react to the new challenges it imposes and begin to cope with those challenges. It is important to note, however, that the challenges a consumer endures do not stop when the person begins to cope with a financial constraint. Although we suggest that these stages emerge sequentially, each stage does not necessarily end when the next stage begins. Further, the coping process does not stop when the consumer has adapted to a constraint. Instead, these stages likely interact with and shape each other. This idea is illustrated by the curved arrows at the bottom of the figure, whereby the degree to which a consumer has adapted to a constraint influences how they react and cope with the constraint in the future.

Despite some likely overlap across the stages, we believe that a multi-stage temporal dimension is useful for illustrating how consumers respond to financial constraints. Notably, these stages provide a common lens for all four perspectives on financial constraints. The experience of financial constraints seems to follow the same general, three-stage pattern regardless of whether the constraint is viewed from the lens of resource scarcity, choice restriction, social comparison, or environmental uncertainty. Looking across these perspectives, we begin to observe meaningful differences in how consumers react, how they cope, and how they adapt.

Reacting. The first stage of consumer responses to financial constraints is reactive. Constraints impose an upper bound on what people can accomplish, such that a consumer facing financial constraints cannot engage in the same behaviors as someone who is not facing these constraints. In the first stage, binding financial constraints force consumers to react to the limitation imposed by the constraint.

Given the presence of a new constraint, the reacting stage is typically experienced as unpleasant. The specific nature of the unpleasantness, however, depends on whether the constraint is rooted in resource scarcity, choice restriction, social comparison, or environmental uncertainty. For example, consumers experience resource scarcity by feeling more cognitively taxed (Mani et al., 2013). Consumers react to choice restriction by becoming more aroused, frustrated, and aggressive (Kristofferson, McFerran, Morales, & Dahl, 2016; Zhu & Ratner, 2015). Consumers react to social comparison by feeling inferior and lowering their self-esteem (Chaplin & John, 2007; Sharma & Alter, 2012). Finally, consumers react to environmental uncertainty by feeling stress and lack of control (Brunner, 1997; De Witte, 1999).

Coping. However, the first stage of responding is reactive, the second stage is more proactive. After the initial, unpleasant encounter with a financial constraint, consumers begin to cope with the constraint. If the constraint is mutable, consumers might seek to remove the constraint (e.g., Cannon et al., 2018). In many cases, however, the constraint is unchangeable and consumers must figure out ways to manage the constraint.

Coping responses in Stage 2 include consumers shifting how they think and make decisions. The specific nature of these shifts depends on how they experience the financial constraint. For example, consumers cope with resource scarcity by stretching their resources further and spending them more efficiently (Shah et al., 2012). Consumers cope with choice restriction by becoming more creative (Hill, 2001; Mehta & Zhu, 2016; Rosa, Geiger-Oneto, & Fajardo, 2012) and savoring ordinary experiences (Quoidbach, Dunn, Hansenne, & Bustin, 2015). Consumers cope with unfavorable social comparisons by investing in material goods to increase their self-esteem (Chaplin, Hill, & John, 2014) or by bolstering their social rank by consuming desirable goods that are in scarce supply (Kuziemko, Buell, Reich, & Norton, 2014; Sharma & Alter, 2012). Finally, consumers cope with environmental uncertainty by seeking to re-establish some control over the situation (Hill, Martin, & Chaplin, 2012; Hill, Rodeheffer, Griskevicius, Durante, & White, 2012).

Adapting. Over time, as some consumers repeatedly experience financial constraints, they become attuned to the constraints. This process of adapting to the constraint changes how consumers respond to new constraints. We propose that the constraint imposed on one's behavior fosters the development of specific patterns of thinking and behaving that are adapted to the constraint.

For instance, consumers adapt to resource scarcity by spending a larger proportion of their financial resources on necessities (Cole, Thompson, & &Tufano, 2008) and becoming less susceptible to framing effects (Shah et al., 2015). Consumers adapt to choice restriction by exhibiting less reactance (Snibbe & Markus, 2005) and more resilience when encountering new choice restrictions (Thompson, Hamilton, & Banerji, 2018). Consumers adapt to unfavorable social comparisons by seeing themselves as more connected to others (Piff et al., 2010) and giving more consideration to how their choices affect others (Kraus & Stephens, 2012). Finally,

consumers adapt to environmental uncertainty by becoming more responsive to situational cues (Mittal, Griskevicius, Simpson, Sung, & Young, 2015; Young, Griskevicius, Simpson, Waters, & Mittal, 2018) and maximizing opportunities in the present (Ozanne, Hill, & Wright, 1998).

Summary. We propose that it is useful to conceptualize consumer responses to financial constraints across three stages: reacting, coping, and adapting. These stages roughly reflect how consumers respond to financial constraints over time, distinguishing between immediate responses, shorter-term responses and longer-term responses. These stages highlight that although initial reactions to financial constraints tend to be largely negative, a longer window of responding reveals that consumers often develop adaptive solutions tailored to dealing with the financial constraints they face.

How Financial Constraints Influence Consumer Behavior

Having presented the two underlying dimensions of our framework—four perspectives on financial constraints and three stages of responding to financial constraints—we next provide a guided review of the four literatures examining how financial constraints influence consumer behavior. An overview is provided in Table 2.

In the following sections, we review each of the four perspectives on financial constraints, and we organize the review by describing responses across the three stages, with a particular focus on recent research highlighting how people adapt to financial constraints.

The Resource Scarcity Perspective

The resource scarcity perspective focuses on how lack of economic resources prevents consumers from satisfying all their needs and wants. In this section we discuss how consumers react to, cope with, and adapt to financial constraints rooted in resource scarcity.

Reacting. When consumers encounter resource scarcity, their attention is drawn to the scarce resource (Mullainathan & Shafir, 2013). Consumers react by becoming much more focused on money and the cost of goods and services. This tunneling of attention leads consumers to ignore other information (Mullainathan & Shafir, 2013; Zhu, Yang, & Hsee, 2018). For example, in one lab study, participants were asked to place an order from a restaurant menu. Some participants were told that they would have $20 to spend, while others were told that they would have $100 to spend. Eye-tracking data revealed a clear pattern in how participants perused the menu: those who faced a tighter financial constraint spent more time looking at the prices of items on the menu than did those who had more money to spend. Financially constrained participants also spent less time reading about the actual dishes on the menu or the caloric information contained in the menu (Tomm & Zhao, 2016). Put simply, financially constrained participants were more focused on the cost of the food than the food itself. This greater focus on cost can have negative

Table 2
Examples of Responses to Financial Constraints Across Three Temporal Stages

Perspective	Stage 1: react	Stage 2: cope	Stage 3: adapt
Resource Scarcity	Increased attention to money and cost Feel cognitively taxed	Use resources more efficiently Increased consideration of opportunity costs	Money remains top of the mind Less susceptible to framing effects and various "pricing tricks"
Choice Restriction	Heightened arousal Feelings of frustration and aggression	Savor ordinary experiences Find creative uses for products	Become more innovative and resourceful Devalue unavailable alternatives
Social Comparison	Feelings of inferiority Lower self-esteem	Seek scarce products Bolster social rank	Seek material possessions Become more interdependent and prosocial toward others
Environmental Uncertainty	Stress and anxiety Feeling lack of control	Seek control over environment Attempt to make the future more certain	Discount the future more steeply Enhanced ability to shift among tasks

consequences. For example, financially constrained participants were so focused on the cost of each item on the restaurant menu that they often failed to notice text at the bottom of the menu offering a discount (Tomm & Zhao, 2016).

The fact that scarcity of money attracts the consumer's attention to money suggests that it may impose a cognitive burden, reducing cognitive bandwidth and possibly hindering cognitive performance (Mani et al., 2013). For example, sugarcane farmers in India often experience big fluctuations in household income. Before a harvest, farmers face more financial constraints than after the harvest. In one study, sugarcane farmers completed a series of cognitive tests prior to harvest and after harvest (Mani et al., 2013). Strikingly, the farmers performed significantly worse on these tests prior to harvest (when finances were most constrained) than after harvest (when the constraints were somewhat relaxed). The same pattern of effects was observed when the absolute level of resources was less constrained. Participants at a mall in New Jersey were asked to think about a difficult financial problem (e.g., an expensive car repair) or an easier financial problem (e.g., and inexpensive car repair) and how they would come up with the money to handle these financial challenges (Mani et al., 2013). Of course, difficult financial problems impose a greater challenge for everyone, but poorer and wealthier participants experienced these challenges differently. While considering the financial problems, all participants completed tasks that measured fluid intelligence and cognitive control. Wealthy participants performed similarly on those tasks regardless of whether they considered the difficult or easy financial problem, but poor participants performed significantly worse on the cognitive tasks while considering the difficult than the easy financial problem (Mani et al., 2013). This suggests that the cognitive demands of resource scarcity may be more severe for those on a limited budget, imposing a greater tax on mental bandwidth.

Although there has been some debate about the degree to which temporary financial constraints reduce cognitive performance (e.g., Carvalho, Meier, & Wang, 2016; Wicherts & Scholten, 2013), temporary financial constraints seem to induce a present bias among consumers. Specifically, when comparing the behavior of low income consumers before versus after payday, the before-payday group favored receiving money sooner when making intertemporal choices about monetary rewards (Carvalho et al., 2016). Research suggests that cognitive burdens can decrease self-control (Vohs, 2013), and it will be important to disentangle the effects of temporary financial constraints on cognitive function versus self-control in future research.

Coping. Although consumers' immediate reactions to resource scarcity are associated with negative consequences, consumers often find ways to cope with resource scarcity. After searching for ways to eliminate a resource constraint, consumers seek out ways to limit its effects (Cannon et al., 2018). For instance, consumers facing scarcity can "stretch" their resources and use them more efficiently (Fernbach, Kan, & Lynch, 2015; Shah et al., 2012). For example, participants in one experiment were given either scarce or abundant resources with which to play a video game called Angry Blueberries. In this game, participants earned points by shooting blueberries at waffles. Financially constrained participants were given a small number of blueberries for each level, while nonconstrained participants were given many blueberries for each level (Shah et al., 2012). Financially constrained participants spent significantly more time aiming each shot and earned more points per shot. That is, they were more focused on how they were using their resources and they used their resources more efficiently.

The resource scarcity literature also highlights that when consumers are financially constrained, they may think more about opportunity costs and tradeoffs. Although research has typically found that consumers neglect opportunity costs and tradeoffs (Frederick, Novemsky, Wang, Dhar, & Nowlis, 2009)—that is, consumers rarely think about what they are giving up when they make a purchase—this may be less true for consumers who are financially constrained. There is some evidence that opportunity costs may be more psychologically salient for consumers facing scarcity (Shah et al., 2015; Spiller, 2011), though other evidence suggests that low and high income consumers are equally likely to spontaneously consider opportunity costs (Plantigna, Krijnen, Zeelenberg, & Bruegelmans, 2018). For example, in one study, participants completed a hypothetical shopping task. Everyone was given the same budget, but for some participants the budget was framed in weekly amounts, while for others, the budget was framed in monthly amounts (Spiller, 2011). Weekly budgets, which were smaller, created the perception of scarcity. In the shopping task, participants had the opportunity to select items to buy right now, and they could also preview which items would be for sale in the future. This made it possible for participants to assess the opportunity costs of making a purchase (i.e., if they bought something today, they may not have funds

left over to buy the things available on future days). In this study, participants considered opportunity costs more often when the same size budget was framed as smaller (Spiller, 2011). This suggests that when money feels scarce, consumers cope by giving more consideration to opportunity costs.

Adapting. In the longer-term, resource constraints change the nature of consumer spending. Not surprisingly, resource constrained consumers spend a larger proportion of their financial resources on necessities relative to discretionary purchases than less constrained consumers (Cole et al., 2008). Financially constrained consumers are also more likely to choose store brands, which are more affordable than name brands (Ailawadi, Neslin, & Gedenk, 2001).

Over time, experiencing financial constraints can increase the motivational value of money and make thoughts about money chronically top of mind. Classic work by Bruner and Goodman (1947) shows that poor children were more likely to overestimate the size of coins than rich children even though they were equally accurate in estimating the size of cardboard discs. In more recent work, participants were asked to imagine that they went to a doctor and were told that they were seriously ill, but would make a full recovery (Shah, Zhao, Mullainathan, & Shafir, 2018). Participants were then asked to name the first three thoughts that came to mind. Nearly all participants mentioned at least one emotion-related thought (e.g., they would feel scared or relieved). Notably, though, financially constrained participants were more likely than non-constrained participants to spontaneously mention cost even when nothing in the experiment explicitly mentioned money (Shah et al., 2018).

Once thoughts about money become top-of-mind, they are hard to suppress. In another study, participants were asked to let their minds wander for 3 min. In one condition, they were told that they could think about anything at all, but that they should not think about how much they drive each month. In the other condition, participants were told to not think about the cost of driving each month. Poor and rich participants did not differ in their ability to suppress thoughts about the amount of driving they did each month. However, poor participants found it harder to suppress thoughts about the cost of driving than rich participants (Shah et al., 2018). These findings echo classic research showing that when people try to suppress thoughts about a topic, that topic can actually become more top-of-mind (Wegner, Schneider, Carter, & White, 1987). For the poor, attempts to suppress thoughts about money might, ironically, make those thoughts even more accessible.

As consumers face financial constraints over time, they become accustomed to thinking about limited budgets and opportunity costs, which provides them with a more stable perspective on how to value goods and services. A classic finding shows that consumers are more likely to travel to a different store to get a $50 discount on a $300 purchase than they are for a $1,000 purchase (Tversky & Kahneman, 1981). From a normative perspective, consumers should be equally likely to travel for $50 regardless of the price of the item, but because they do not typically know how to value $50 in absolute terms, they look for comparisons in the decision context. For most consumers, $50 feels like a more substantial discount compared to $300 than $1,000, so they are more likely to travel for the discount when the item is cheaper. However, recent research suggests that low income consumers, who have adapted to financial constraints, tend to respond differently. Shah et al. (2015) asked participants whether they would be willing to travel 30 min to save $50 on a purchase. Some participants were told that the base price of the purchase was $300, some were told it was $500, and some were told it was $1,000. Notably, low income consumers were more consistent than higher income participants in their willingness to travel for the discount regardless of the purchase price. Moreover, when asked what they were considering as they made their decision, low income participants were more likely to say that they were considering what they could not buy if they did not save the $50 on the purchase (i.e., they were giving more consideration to opportunity costs). Because they used opportunity costs to evaluate the discount, low-income consumers were influenced less by the way the problem was framed.

In the marketplace, the fact that money is top-of-mind can have potentially beneficial consequences for financially constrained consumers. Research finds that poor consumers are often less susceptible than wealthier consumers to hidden taxes (Goldin & Homonoff, 2013) and other pricing tricks, such as "quantity surcharges," in which the per-unit cost for an item increases when a higher quantity is purchased (Binkley & Bejnarowicz, 2003).

In summary, when considering financial constraints from the perspective of resource scarcity, new constraints force consumers to shift their attention to money, making them feel cognitively taxed. They cope with financial constraints by using resources more efficiently and considering

opportunity costs more carefully. Over time, thoughts of money become chronically top of mind, and this dark cloud may have the silver lining of making financially constrained consumers less susceptible to framing effects and various pricing tricks.

The Choice Restriction Perspective

A second perspective on financial constraints is that they limit a consumer's choices because many options become unattainable. In this section, we discuss how consumers react to, cope with, and adapt to financial constraints from the perspective of choice restriction.

Reacting. As a starting point, restricting people's choices is well-known to produce psychological reactance, which increases people's desire for the specific options that are being restricted (Cialdini, 2009). For example, learning that a desirable pair of shoes exceeds his budget might make a consumer want this particular pair of shoes even more.

Emerging research is beginning to paint a more temporally nuanced picture of how consumers react to choice restrictions. One series of studies examined how consumers respond to situations in which they encounter large or small quantities of items available in a given product category (Zhu & Ratner, 2015). For example, a grocery store can offer large or small quantities of each type of fruit, or a clothing store can display large or small baskets of accessories. When consumers encounter a limited quantity of products available for consumption, their level of arousal tends to increase, polarizing their preferences. As a result, restricting choice tended to increase consumers' desire for their most favorite and decrease desire for their least favorite item in a set of alternatives (Zhu & Ratner, 2015).

Research further suggests that this heightened level of arousal triggered by choice restriction may lead to frustration and aggression. Merely exposing consumers to promotional ads that present a target product as being limited in availability can lead to increased aggressive behavior (Kristofferson et al., 2016). Exposure to communications that inform consumers of a limited product quantity available (e.g., only three iPhones available for the discounted price of $50) activates perceptions of a competitive threat and leads to physiological changes that prepare the body to aggress. When consumers worry about a desired product not being available to them, they display significantly more aggression in immediately subsequent tasks, choosing more violent video games, shooting more bullets in a video game, and demonstrating physical aggression in response to the jamming of a vending machine (Kristofferson et al., 2016).

Coping. While encountering choice restrictions can initially produce feelings of frustration and aggression, over time, consumers begin to cope with choice restriction in more productive ways. For example, reminding participants of constraints on choice may increase product use creativity during a subsequent task (Mehta & Zhu, 2016). Participants reminded of constraints on choice built more novel product prototypes and suggested more creative uses for products. These findings suggest that thinking about choice restriction in a general sense, rather than experiencing it, can reduce functional fixedness and encourage consumers to think more creatively about the way they use products.

Choice restriction can also contribute to greater savoring of ordinary experiences (Quoidbach et al., 2015). Savoring is a form of emotional regulation in which consumers actively try to prolong or intensify a positive experience. One study showed that the more limited the set of travel experiences that participants have had (controlling for factors like income and social class), the more they predicted they would savor a vacation trip to a pleasant but ordinary destination of their choice (Quoidbach et al., 2015). A second study showed that when U.S. tourists were experimentally prompted to feel that they had more limited travel experiences by checking off which of 12 exotic travel destinations they had visited (e.g., Tokyo, New Delhi, Sydney), they spent less time savoring a visit to a local landmark than U.S. tourists prompted to feel more well-traveled by checking off which of 12 ordinary destinations they had visited (e.g., New York, Chicago, Orlando; Quoidbach et al., 2015).

Adapting. Long-term exposure to choice restrictions has been associated with greater resourcefulness and more innovative use of resources. For instance, consumers living in poverty adapt by generating more innovative solutions for their consumption problems (Hill, 2001; Rosa et al., 2012). The innovative behaviors of consumers living in poverty are deliberate and procedural, suggesting that they are adjusting to the demands of the situation (Hill, 2001). Over time, consumers living in poverty actively experiment with scavenged artifacts. Ethnographic research shows that the poor frequently adapt products from one domain (e.g., kitchen foil) to another domain (e.g., wallpaper) and combine a variety of ingredients and materials to make products (e.g., combining animal fat from

kitchen scraps with purchased ingredients to make soup; Rosa et al., 2012).

For consumers who face severe financial constraints, such as homeless consumers, possessions and consumption behaviors that other consumers take for granted are unavailable or severely restricted. One of the implications is that for these consumers, acquiring possessions involves activities that are markedly different from those experienced by a typical consumer (Hill & Stamey, 1990). For a homeless population living outside of the social welfare system, many of the necessities of life are scavenged from the refuse of others rather than purchased. Perceiving value where others see garbage requires flexibility and creativity, because the same sources cannot be relied on to provide sustenance for extended periods of time (Hill & Stamey, 1990).

Restrictions on choice can be particularly difficult for consumers who are socialized in cultures in which free choice tends to be associated with the consumer's self-identity. Research on consumer socialization suggests that parenting styles and parenting practices differ based on their levels of financial resources and the choice restrictions they expect their children to face (Kusserow, 1999). Kusserow's ethnographic research with parents and young children in the Northeastern United States showed that children growing up in working class families were encouraged to accept that they would not always be able to make their own choices, so they should "buck up." Parenting styles in these environments tended to instill a "get over it" attitude. Conversely, in middle-class families with higher levels of economic resources, parenting styles emphasized honoring children's preferences and choices so that they could find the right societal outlet for them.

Over time, consumers socialized in environments with high (vs. low) levels of financial resources adapt by expecting to exercise more free choice (Markus & Conner, 2013). As a result, consumers from high (vs. low) socioeconomic status backgrounds are more likely to exhibit psychological reactance in response to choice restriction (Snibbe & Markus, 2005). Recent research also suggests that when consumers cannot obtain the alternative they initially choose, consumers who grew up in more financially constrained environments devalue this alternative. This devaluation allowing them to enjoy a substitute more than consumers who grew in financially privileged environments (Thompson et al., 2018). Because choice restriction is less aversive and triggers less psychological reactance for those with long-term experiences dealing with financial constraints, these consumers exhibit greater resilience in shifting preferences away from their initial choices.

In summary, when they encounter financial constraints that restrict their choices, consumers react by becoming more aroused, reflexively increasing their desire for the restricted option, feeling frustrated, and even becoming more aggressive. They cope with this constraint by savoring ordinary experiences and finding more creative uses for products. Over time, consumers adapt to choice restrictions by becoming more resourceful and innovative. They also show more resilience when encountering new instances of choice restriction. This greater resilience is manifested as lower psychological reactance in response to the unavailability of a desired alternative and greater flexibility in shifting preferences away from the unavailable alternative.

The Social Comparison Perspective

The third perspective we examine is social comparison, in which consumers experience financial constraints as a shift in their real or perceived status relative to other people. In this section, we discuss how consumers react to, cope with, and adapt to financial constraints that prompt unfavorable social comparisons.

Reacting. Consumers facing a financial constraint are often confronted by a perception of relative disadvantage. This can create a negative affective state and feelings of inferiority (Sharma & Alter, 2012). These affective responses can arise even when feelings of financial deprivation are experimentally primed. In one study, participants who recalled a situation in which they felt financially worse off relative to their peers indicated that they felt significantly more inferior and they expressed more negative emotions compared to participants who recalled a situation in which they felt financially better off than their peers (Sharma & Alter, 2012).

Coping. To cope with these negative affective responses, consumers may try to bolster their social rank and focus on others who are worse off than them. For example, one experimental study created an uneven income distribution across a group of participants. Participants were then given the opportunity to redistribute money to other participants. Most participants redistributed the money to others who were worse off than them. However, participants who earned the second-to-lowest incomes were less likely than other groups to

redistribute the money to others who were worse off than they were, suggesting that they were concerned about the possibility of moving into last place (Kuziemko et al., 2014).

Consumers also may try to alleviate their negative affect by consuming more scarce goods to bolster their relative social position. In one study, participants were presented with bowls of M&Ms in which one color of the candy was scarce relative to other colors. Consumers who felt economically deprived were more likely to eat the scarce color of M&Ms than those who did not feel economically deprived (Sharma & Alter, 2012). Consumers seemed to be trying to counteract their feelings of economic deprivation by acquiring goods that were less available to other consumers (Sharma & Alter, 2012).

Consumers also may try to bolster their relative social position when interacting with service providers. Ethnographic research suggests that financially constrained consumers struggling to access financial services deploy an array of self-presentation strategies when they visit banks (Bone, Christensen, & Williams, 2014). For example, consumers mention strategically dressing up, wearing a suit, and carrying a briefcase to signal their credit worthiness to service providers.

Adapting. Over the long term, the unfavorable social comparisons triggered by financial constraints can have a debilitating effect on consumers' self-esteem, especially when financial constraints are accompanied by other factors such as minority status (Bone et al., 2014). In turn, lower self-esteem is related to the development of materialistic values (Braun & Wicklund, 1989; Hill & Gaines, 2007; Richins & Dawson, 1992). Materialism refers to "the importance a person places on possessions and their acquisition as a necessary or desirable form of conduct to reach desired end states including happiness" (Richins & Dawson, 1992, p. 307). Material goods provide a way for individuals to compensate for insecurity and negative feelings about the self, and desire for material goods as way to bolster one's self-concept begins at an early age (Chaplin & John, 2007).

The tendency for financially constrained consumers to rely on material goods to bolster self-esteem is especially pronounced during adolescence (Chaplin et al., 2014). In one study, children and adolescents from impoverished urban neighborhoods (median household income of $25,688) and affluent suburban neighborhoods (median household income in the range of $96,080–$187,574) constructed a collage to answer the question "What makes me happy?" and the number of material objects included on their collages was used as measure of materialism. At younger ages (8–10 years), impoverished children indicated a similar level of materialism as affluent children. However, impoverished adolescents (11–17 years) showed a stronger reliance on material things (e.g., money, new clothes) to communicate what made them feel happy in their collages as opposed to wealthy adolescents, who included more activities (e.g., playing basketball) and people (e.g., friends). In contrast, among adults, there is evidence that social comparison informs consumers about whether or not they can afford to buy something, suggesting that negative social comparison may reduce purchases. Seeing oneself as more financially constrained than other consumers who own a product may serve as a cue that one cannot afford to purchase products such as durable goods (Karlsson, Gärling, Dellgran, & Klingander, 2005).

The perspective of social comparison also helps us understand how financial constraints shape consumers' interactions with other people. Being socialized in an environment marked by financial constraints fosters the development of an interdependent self-view (Markus & Conner, 2013; Stephens et al., 2007). Consistent with an interdependent view of the self, research finds that working class adults rate themselves as more overlapping with the selves of their mothers and the selves of their closest friend than middle-class adults (Carey & Markus, 2016). Similarly, when consumers were asked to diagram their social networks by drawing circles to represent themselves and other people, working-class adults drew circles representing themselves as close in size to the circles representing their friends, reflecting less self-inflation and less need to stand out and distinguish themselves from others in their network than middle-class adults, who drew their own circles larger than those of their friends (Grossmann & Varnum, 2010). An interdependent view of the self is adaptive for consumers who are financially constrained because the material and social characteristics of these environments require attending to and relying on others.

Also consistent with an interdependent view of the self, research suggests that consumers who rank themselves as relatively lower in social status show greater sensitivity to the social environment (Kraus, Piff, & Keltner, 2011) and higher empathic accuracy and compassion for others (Kraus, Côté, & Keltner, 2010). Compassion promotes prosocial behavior (Piff et al., 2010), and prosocial behaviors such as

charitable giving tend to be more prevalent for people who feel a lower sense of social status, even though their objective resources are more limited (Piff et al., 2010). In one study, for example, children from lower-income families donated more tokens to an anonymous sick child than those from upper-income households (Miller, Kahle, & Hastings, 2015).

In summary, the social comparison literature suggests that consumers initially react to financial constraints by feeling inferior, reducing their self-esteem. They cope with the unfavorable social comparisons triggered by financial constraints by seeking to acquire scarce products and by bolstering their social rank. Over time, consumers adapt by seeking materialistic possessions and by becoming more interdependent, which increases their sensitivity to the social environment, increasing both their empathic accuracy and generosity to others.

The Environmental Uncertainty Perspective

Examining financial constraints from the perspective of the environmental uncertainty literature suggests that financial constraints limit the predictability of the environment. In this section, we discuss how consumers react to, cope with, and adapt to financial constraints rooted in environmental uncertainty.

Reacting. When consumers face a new financial constraint, it can create uncertainty. Uncertainty stemming from financial constraints is stressful and threatening (De Witte, Pienaar, & De Cuyper, 2016; Grupe & Nitschke, 2013). Experiencing environmental uncertainty leads people to feel incapable of responding effectively because uncertainty implies uncontrollability (De Witte, 1999). For example, higher uncertainty about one's financial future is associated with lower perceived control (Vander Elst, Van den Broeck, De Cuyper, & De Witte, 2014).

Consistent with the stress produced by uncertainty, cues of economic uncertainty have been shown to increase people's consumption of food, especially snacking on high-calorie foods (Laran & Salerno, 2013; Sevilla & Redden, 2014).

Coping. As a starting point, consumers often cope with environmental uncertainty by seeking to re-establish some control over the situation. For example, economic uncertainty is associated with higher purchases of beauty products by women (Hill, Martin, et al., 2012; Hill, Rodeheffer, et al., 2012). Women may purchase more beauty products in order to secure greater resource stability, which likely bolsters their sense of control (Hill, Martin, et al., 2012; Hill, Rodeheffer, et al., 2012; Netchaeva & Rees, 2016).

Consumers also cope with environmental uncertainty in less intuitive ways. For example, parents respond to economic uncertainty by spending more on their daughters rather than their sons (Durante, Griskevicius, Redden, & White, 2015). At first glance, it might appear that parents are more protective of their daughters when times are uncertain. But a deeper examination shows that this effect stems from parents trying to assert more control and predictability in an uncertain environment in an evolutionary sense. In fact, there is good reproductive reason why mammalian parents divert resources to female rather than male offspring in the face of environmental uncertainty (Trivers & Willard, 1973). In unpredictable conditions, many males produce no offspring; by contrast, females are much more likely to produce at least some offspring even in bad conditions. Investing in female offspring, therefore, increases the certainty of continuing the parents' genetic lineage.

Adapting. Over time, people adapt to environmental uncertainty in a variety of ways. Much research in this area is based on the interdisciplinary framework of life history theory, which emphasizes that unpredictability is a fundamental dimension of the environment for all organisms, including humans (Ellis et al., 2009). Organisms therefore are highly attuned to the level of unpredictability in their environments. A life history approach centers on the notion that over a long period of time, *predictable* environments encourage consumers to adopt what's known as a "slow life history strategy," which is associated with a focus on maximizing long-term opportunities. By contrast, *unpredictable* environments encourage consumers to adopt a "fast life history strategy," which is associated with a focus on the present and maximizing current benefits (Griskevicius et al., 2013; Simpson, Griskevicius, Kuo, Sung, & Collins, 2012).

Consistent with faster life history strategies, long-term economic uncertainty has been linked with steeper discounting of the future and greater risk-taking for immediate rewards (Griskevicius et al., 2013). Although the ability to delay gratification is associated with many positive outcomes such as educational attainment and lifetime income (Mischel, 2014), *not* delaying gratification is adaptive in environments that are unpredictable, in which payoffs are uncertain (Ellis et al., 2009; Griskevicius, Delton, Robertson, & Tybur, 2011; Griskevicius, Tybur, Delton, & Robertson, 2011). In a predictable environment, it is often advantageous

to wait for a larger outcome that will be available later. However, when the environment is unpredictable, options that are available now may not be available in the future. Thus, it is adaptive for financially constrained consumers to use a higher temporal discounting rate, giving the certainty of current payoffs higher weight. For example, if a consumer cannot trust that the bank will return their money (plus interest) to them at a later date, it does not make sense to save money in the bank (Jachimowicz, Chafik, Munrat, Prabhu, & Weber, 2017). Further, if financially constrained consumers do not expect upward mobility over time, they might feel that there is little chance for improvement in their economic state in the future (Hill & Martin, 2014). Lack of optimism about the future can reduce perceived financial well-being (Netemeyer, Warmath, Fernandes, & Lynch, 2018) and increase willingness to engage in criminal behavior, especially if it provides a "thrill" in the present (Ozanne et al., 1998).

Emphasizing the long-term nature of these effects, the unpredictability of people's *childhood environments* often has a stronger effect on behavior than their current environment (Belsky, Steinberg, & Draper, 1991; Ellis, Giudice, & Shirtcliff, 2013; Simpson et al., 2012). In one set of studies, researchers observed how much consumers ate when they were offered snack foods. For consumers who grew up in economically predictable environments, snack consumption depended on whether they were currently hungry: consumers who were hungry ate more snacks than those who were not hungry. In contrast, levels of hunger played almost no role in snack consumption for consumers who grew up in economically unpredictable environments (Hill, Cunningham, & Gentlemen, 2016; Hill, Prokosch, DelPriore, Griskevicius, & Kramer, 2016; also see Hill, Rodeheffer, DelPriore, & Butterfield, 2013). If food was presented to them, they ate it regardless of whether they were hungry or not. For consumers who grow up in unpredictable environments, it is generally adaptive to not pass up the opportunity to consume as much as possible in the present because it is uncertain when another opportunity will arise. Emerging research suggests that exposure to unpredictable environments during childhood is a significant contributor to adult obesity (Maner, Dittman, Melzer, & Mcnulty, 2017).

Building on the importance of unpredictability in childhood environments, responses to financial constraints in adulthood may be moderated by economic uncertainty in childhood (Griskevicius et al., 2013; Mittal & Griskevicius, 2014). For example, financial constraints lead consumers from unpredictable childhoods to increase their risk-taking (Griskevicius et al., 2013). One reason this is important is that risk plays a central role in decisions about health insurance (Sitkin & Pablo, 1992), where people with a higher propensity to take risks are less likely to act to protect themselves from a probable risk by purchasing insurance (Mechanic & Cleary, 1980). Indeed, when consumers were exposed to financial constraints, those from poorer childhoods desired significantly less health coverage (Mittal & Griskevicius, 2016). Although foregoing health insurance is widely considered a bad financial decision, consumers who do not expect to live a long and stable life may wonder why they should invest a sizeable amount of money now when they may never see the returns.

Although growing up in a stressful environment is often associated with negative outcomes in adulthood, emerging research is finding that consumers who grew up in unpredictable environments may show enhanced cognitive performance in the face of financial constraints. For example, people who experience an unpredictable early-life environment respond to financial constraints in adulthood by showing improved performance on some executive functions and working memory (Mittal et al., 2015; Young et al., 2018). Specifically, people who experience uncertainty in childhood are better able to shift from task to task and their working memory is able to take in more information from the environment. Both of these tendencies are adaptive in uncertain environments that are continually changing. In such uncertainty environments, it is critical to be able to track and rapidly update information, one about the immediate surrounding environment, as well as rapidly switch one's attention from one thing to another.

In summary, when interpreting financial constraints as environmental uncertainty, consumers react by feeling stressed and sensing a lack of control. They cope with this constraint by seeking to re-establish control and boost certainty, including through their purchasing and parenting behaviors. Over time, consumers adapt to environmental uncertainty by becoming more focused on the present and seeking to maximize immediate opportunities, which is an adaptive strategy in environments where the future is difficult to predict. Findings show that the economic uncertainty of one's childhood environment plays an especially important role, moderating their reactions to financial constraints in adulthood. Although it has been long assumed that growing up in stressful

environments is associated only with negative outcomes in adulthood, experiencing financial constraints in adulthood can actually enhance performance on some cognitive tasks for people who grew up in unpredictable environments.

Moving Forward: How Consumers Respond to Financial Constraints

An Emerging View of Consumer Response to Financial Constraints

Our review of four literatures related to financial constraints suggests that the temporal dimension is critical. Across each of the four literatures, we observe that although consumers' initial responses to a financial constraint tend to be aversive, consumers often exhibit coping strategies in response to financial constraints. We also observe that over a longer time, many consumers tend to adapt to financial constraints. As a result, long-term exposure to financial constraints moderates consumers' short-term responses to financial constraints.

We formalize these insights into two propositions, developed in the subsequent sections:

P1: In response to financial constraints, consumers develop proactive coping strategies.

P2: Long-term adaptation to financial constraints moderates consumers' initial reactions to financial constraints.

Development of Coping Strategies. Our framework emphasizes consumer resilience, highlighting that consumers often develop proactive strategies to cope with financial constraints. Although consumers may suffer negative consequences when they initially encounter financial constraints, consumers develop strategies that help them navigate within these constraints. Even if consumers themselves do not explicitly recognize that they are employing these coping strategies, such silver linings can be found across all four types of financial constraints. For example, consumers cope with resource scarcity by becoming more efficient with their resources (Mullainathan & Shafir, 2013) and attempting to reestablish control (Cannon et al., 2018). Consumers cope with choice restrictions by becoming more creative in their use of the options that are available (Mehta & Zhu, 2016). Consumers cope with unfavorable social comparisons by seeking exclusive products (Sharma & Alter, 2012) and using self-presentation strategies (Bone et al., 2014) to bolster their social standing. Finally, consumers cope with environmental uncertainty by acquiring products that bolster their sense of control (Hill, Martin, et al., 2012; Hill, Rodeheffer, et al., 2012) and shifting the allocation of their resources (Durante et al., 2015). Across all four of these literatures, we find clear evidence that consumers proactively cope with financial constraints.

Long-term Adaptation Moderates Initial Reactions. Another indication that the temporal dimension of our framework is critical is that initial reactions to financial constraints may differ based on a consumer's long-term exposure to a financial constraint. Indeed, many studies find that differences between people who grew up financially constrained versus unconstrained tend to be most strongly evoked in stressful contexts, such as when adults are experiencing a new financial constraint (Griskevicius et al., 2013; Mittal & Griskevicius, 2014; Mittal et al., 2015).

Much of the research in this area has used childhood socioeconomic status or income as a proxy for long-term exposure to financial constraints. The moderating effect of long-term exposure is observed as an interaction effect between these variables and a financial threat in the current environment on current behavior. For example, facing a current threat of resource scarcity leads women from financially constrained backgrounds to eat more, whereas it leads women from a relatively unconstrained backgrounds to eat less (Hill et al., 2013). Thus, even when there were no differences under benign conditions, the behavior of consumers who grew up financially constrained versus unconstrained diverges significantly when they experience a new constraint. We observe a similar divergence in choices of health insurance. When adult consumers were exposed to financial threat, those from poorer childhoods desired less health coverage and those from wealthier childhood desired greater health coverage (Mittal & Griskevicius, 2016). When consumers from different childhood socioeconomic backgrounds could not get the alternatives they had initially chosen, they reacted differently to a short-term choice restriction. When they learned they could not obtain the alternative they initially chose, consumers who grew up in financially constrained environments devalued their initial choice —allowing them to enjoy a substitute—more than consumers who grew in financially privileged environments (Thompson et al., 2018).

We observe analogous effects when income is used as a proxy for long-term exposure to financial

constraints. Recent research suggests that initial reactions to resource scarcity are especially burdensome for consumers facing chronic financial constraints. When participants at a mall in New Jersey were asked to think about either a difficult financial problem (e.g., an expensive car repair) or an easier financial problem (e.g., and inexpensive car repair), wealthy participants performed similarly on a series of cognitive bandwidth tasks regardless of whether they considered the difficult or easily financial problem. However, poor participants performed significantly worse on the cognitive tasks while considering the difficult financial problem (Mani et al., 2013). Coping with resource scarcity is cognitively demanding, but it appears that these cognitive demands are heightened for consumers who have been coping with financial constraints for a longer period of time.

Why does a current financial threat activate different responses for those who have experienced long-term financial constraints versus those who have not? It may be because early-life experiences shape people's stress responses, which may persist in adulthood (Repetti, Taylor, & Seeman, 2002; Taylor, 2010). As a result, facing financial stressors as adults may trigger different stress responses among consumers who have had early exposure to financial constraints. For example, when facing a threatening situation, people from financially constrained backgrounds perceived significantly lower personal control compared to those from unconstrained backgrounds (Mittal & Griskevicius, 2014). These responses, in turn, influenced how long consumers were willing to wait to get rewards, such that consumers from financially constrained backgrounds were more likely to prefer immediate rewards (Mittal & Griskevicius, 2014). Feeling that one has little personal control over one's life outcomes makes it seem reasonable to discount the future and to choose a smaller but sooner reward.

Across these four literatures, we observe that the temporal dimension is critical. While some previous research has focused more on the short-term effects of financial constraints (e.g., Mehta & Zhu, 2016), other work has focused more on the long-term effects (e.g., Rosa et al., 2012). These temporal differences tend to be implicit rather than explicit, with almost no research explicitly considering whether financial constraints might produce similar effects (as in the case of creativity emerging from choice restriction) or different effects in the short-term and long-term. By explicitly examining the temporal dimension of financial constraints across four literatures, we generated two propositions about coping behavior over time and the moderating effect of adapting to long-term financial constraints on initial reactions to new financial constraints. We hope that future research will empirically test these propositions, and we highlight opportunities and challenges for future research in the next section.

Opportunities and Challenges for Future Research

In this section, we propose several fruitful areas for future research to advance our understanding of how consumers respond to financial constraints. First, given the importance of the temporal dimension in understanding how consumers respond to financial constraints, we note some of the challenges and opportunities in integrating research on short-term and long-term effects. We organize the remainder of the section to align with the two propositions we introduced in the previous section: development of coping strategies (*P1*) and the moderating impact of long-term adaptation on initial reactions to financial constraints (*P2*).

Stages of Responding to Financial Constraints. First, additional research is needed to better understand the temporal aspect of how consumers respond to financial constraints. Although we started by categorizing previous findings into three broad stages —reacting, coping, and adapting—it is possible that there are substages reflecting specific cognitive and emotional responses. This temporal timeline may also vary depending on individual differences. Additional research should investigate situational and individual factors moderate consumers' responses to financial constraints over time.

Second, studying the temporal impact of financial constraints on consumer behavior imposes numerous methodological challenges that are worth noting. Long-term adaptations to financial constraints are difficult to study experimentally and are usually assessed via correlational studies in which researchers measure participants' exposure to financially constrained environments during a certain window of time (e.g., using income or objective or subjective measures of socioeconomic status) and correlate these variables with consumer behavior (for a rare exception, see Mittal et al., 2015). A critical limitation of this approach, like other correlational studies, is that it cannot establish causation. One way to address this limitation is to compare the effects of chronic measures with those of short-term manipulations. For example, research has shown that short-term manipulations of resource scarcity can mimic the effects of chronic low income

(Shah et al., 2012). Another challenge in examining the long-term effect of financial constraints is that researchers have more readily available access to populations who have not experienced severe financial constraints (e.g., college students, online panel participants). To understand the effects of more severe financial constraints, researchers need access to populations that are typically less accessible to academic researchers. This is particularly important because, as we have proposed, there are likely to be differences in initial reactions to financial constraints based on long-term exposure to financial constraints. There are likely to be important differences between consumers who are poor in an absolute sense versus reasonably affluent consumers who experience a short-term financial constraint in the laboratory.

Development of Coping Strategies. One important question to answer is when initial reactions to a financial constraint transition into coping behaviors. We have proposed that consumers develop coping strategies over time, but it is likely that individual factors and situational factors shape these strategies. Further, it would be interesting to examine whether consumers can use some of the coping strategies and develop adaptive responses to financial constraints when their own financial circumstances do not induce them. For instance, although it is economically normative for people to *always* consider opportunity costs, the wealthy rarely do (Frederick et al., 2009), whereas poorer individuals seem to do so more often (Shah et al., 2015). Frederick et al. (2009) demonstrate that the wealthy *can* consider opportunity costs when explicitly prompted to do so, or when the costs are explicitly mentioned. Will repeated prompts encourage wealthy consumers to consider opportunity costs more spontaneously, or will they inevitably ignore opportunity costs for most everyday expenses because their immediate circumstances do not necessitate consideration of opportunity costs?

Another interesting question is which cues encourage consumers to think of a financial constraint as an instance of resource scarcity versus choice restriction, social comparison or environmental uncertainty. If we ask consumers to reflect on how resource scarcity, choice restriction, social comparison, and environmental uncertainty influence their lives, would we find that some perspectives on financial constraints are more distressing than others? Would we find that some perspectives generate coping strategies more than others? Further research is needed to map consumers' lay theories about the impact of financial constraints and the coping strategies they generate.

Long-term Adaptation Moderates Initial Reactions. Given the emerging research suggesting that long-term exposure to financial constraints moderates consumers' initial reactions to new constraints (e.g., Griskevicius et al., 2013; Mittal & Griskevicius, 2014; Mittal et al., 2015; Thompson et al., 2018), future research should continue to examine the interactive effects of long-term financial constraints and current constraints. In particular, it will be interesting to examine whether the moderating effects are stronger when a new financial constraint is experienced from the same perspective as the long-term constraint (e.g., chronic low income and a current lack of money) versus when the constraints are experienced differently (e.g., chronic low income and current choice restriction due to a stockout). Might constraints that are experienced as similar prompt consumers to move from reaction to coping and adaptation at a faster rate than experiencing constraints that seem different (e.g., lack of money, stockout of a product)? Some research suggests that the intersectionality of multiple risk factors (e.g., low income, race, gender) can be experienced as particularly aversive by consumers (Bone et al., 2014). This is an important question because consumers from vulnerable populations may experience multiple financial constraints simultaneously.

Given the long-term nature of adaptations to financial constraints, it is relevant to consider whether adaptation will be stronger during critical periods, such as early childhood. Developmental research suggests that events experienced during various stages of childhood and adolescence may impact adult behaviors more than events experienced later in life. Both theoretical and empirical work suggests that the first five years of life may be a critical period for influencing individuals' psychologies (Belsky et al., 1991; Ellis et al., 2003; Quinlan, 2003). For example, individuals experiencing greater unpredictability during the first five years engaged in more risky behaviors as adults than those experiencing unpredictability after five years of age (Simpson et al., 2012). However, critical periods may differ across types of adaptations. Risk-taking behaviors in adulthood have been associated with experiences of financial constraint in childhood (Griskevicius, Delton, et al., 2011; Griskevicius, Tybur, et al., 2011). Materialistic behaviors are observed more often among economically deprived adolescents (Chaplin et al., 2014), but it is not yet clear whether these behaviors are generated by current economic conditions or childhood economic conditions. Further research is

required to uncover critical time periods for different types of adaptations.

In the even longer term, a pertinent question is whether the effects of financial constraints may cross generations. Research on consumer socialization suggests that parenting styles and parenting practices affect the behaviors and decision-making strategies of children (Kusserow, 1999; Richins & Chaplin, 2015). If this is the case, we may observe intergenerational transfer of adaptations to financial constraints. It will be particularly interesting to see whether parenting styles shaped by a parent's own economic experiences will trump the influence of a child's own economic conditions during childhood. That is, will parents raised in financially constrained environments transmit the practices and values of their own upbringing, or will the effects of their current economic situation be stronger? Future research addressing these questions will provide valuable insight.

Conclusion

Drawing insights from four different literatures that have examined financial constraints from different perspectives, we have proposed an integrative framework. Across literatures on resource scarcity, choice restriction, social comparison, and environmental uncertainty we find evidence for a temporal pattern in consumers' responses to financial constraints. After initial reactions to a new financial constraint, which are usually experienced by consumers as aversive, financial constraints prompt consumers to develop coping strategies to manage within the constraint. In the even longer term, consumers adapt to the constraint, and these adaptations moderate their responses to new constraints. By highlighting the temporal dimension of consumers' responses to financial constraints, our framework emphasizes consumer resilience, highlighting that consumers often successfully cope with and devise adaptive strategies to deal with financial constraints. In so doing, this framework helps us understand the often strong and sometimes counterintuitive effects of financial constraints on consumer behavior.

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