



Perceived financial constraints and normative influence: discretionary purchase decisions across cultures

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Abstract

Five studies examine how perceived financial constraints and abundance determine when consumers will engage in solitary or social purchases. When financially constrained, consumers prefer solitary (vs. social) purchases. We also identify self-construal as a moderator of how consumers spend their discretionary income. While independent consumers prefer solitary (vs. social) purchases, interdependent consumers prefer social (vs. solitary) purchases. Interestingly, when consumers have adequate discretionary income, independent as well as interdependent consumers have similar preferences for solitary and social purchases. In addition, for interdependent consumers, communal norms mediate the preference for social purchases. Finally, for independent consumers, making the communal norm salient reverses their preference for solitary purchases, resulting in a preference for social purchases. Our findings suggest how managers can effectively promote different types of purchases under varying financial resource conditions in their global communication strategy.

Keywords Consumer psychology · Cultural differences · Norms · Persuasion · Advertising

Introduction

Financial resources play a central role in consumers' lives and the utilization of these resources, especially when scarce, is an integral part of human life (Sharma et al., 2014; Tully et al., 2015). Further, the perception of being financially abundant or constrained is a ubiquitous phenomenon that differentially influences a variety of consumer behavior. For example, perceived level of financial resources influences discretionary spending (De La Rosa & Tully, 2020;

Sharma et al., 2021), choices (Sharma & Alter, 2012; Tully et al., 2015), and post-consumption behavior (Paley et al., 2019). Given the far-reaching consequences of perceived financial resources across various life domains, further understanding of how such perceptions influence purchase decisions and the factors that moderate such decisions are important areas of investigation.

In this research, we explore the trade-offs that consumers make when deciding how to spend their discretionary income depending on their perceptions of their financial resources being limited or abundant. Past research has shown that solitary purchases versus social purchases is a fundamental purchase trade-off with significant implications (Caprariello & Reis, 2013). Solitary purchases involve spending money on acquiring material goods and/or experiences for oneself and in exclusion of others. In contrast, social purchases involve spending money on acquiring material goods and/or experiences that are shared with significant others and/or experienced in social contexts by oneself with significant others (Caprariello & Reis, 2013). We examine how perceived financial abundance or constraints influence budget allocation for discretionary purchases, as reflected in the preference for solitary versus social purchases.

Consistent with past research findings that financially constrained consumers (a) forego less important goals and

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prioritize their purchases (Fernbach et al., 2015), and (b) are more likely to focus on self-related goals under scarcity (Roux et al., 2015), we predict that consumers will make an important trade-off and will prefer solitary (versus social) purchases under financial constraints. In contrast, under financial abundance, which does not require prioritization, consumers may consider multiple purchase options and will express equal preference for both solitary and social purchases.

Further, we examine global variations in these preferences for social versus solitary purchases as a function of consumers being of an independent self-construal orientation that emphasizes a focus on the self or an interdependent self-construal orientation that emphasizes a focus on significant others (Markus & Kitayama, 1991). We predict that for financially constrained consumers, purchase preferences will be aligned with their self-construal such that independent (versus interdependent) consumers will prefer spending on solitary (versus social) purchases. When consumers have adequate financial resources, as noted earlier, they do not need to prioritize, and hence, will show similar preferences for solitary and social purchases regardless of self-construal.

In terms of process, we propose that communal norms that guide the sharing of resources with significant others (Clark et al., 1998; Fiske, 1992) and are an integral part of social life in both independent and interdependent cultures (Fiske, 1992) account for these cultural differences under financial scarcity. Specifically, communal norms involve the mutual expectation that an individual considers others' welfare and others in turn respond to the individual's welfare. We show that under financial constraints, for interdependent (vs. independent) consumers, because of their greater need for community, communal norms will be instrumental in making social (versus solitary) purchases. However, among independent consumers, even though communal norms will be present, financial constraints and the resultant self-focus will minimize the concern for such norms. Thus, in the context of financial constraints, interdependent (vs. independent) consumers will be more concerned with communal norms, which in turn will increase their relative preference for social purchases over solitary purchases.

Finally, we address two important questions related to the conditions under which culture-based expectations are reversed, specifically when independent and interdependent consumers will engage in social purchases and solitary purchases respectively. We show that if communal norm is made salient, independent consumers will switch to buying social purchases since it has an underlying self-benefit of sharing the purchases with close others. In contrast, if the communal norm is violated, interdependent consumers will focus on themselves since the assumption that significant others will support them seems invalid under such circumstances.

Thus, the key contribution of our research is the demonstration that financially constrained consumers engage in a trade-off between solitary and social purchases and prefer solitary (versus social) purchases. In addition, we show that this trade-off varies in accord with consumers' self-construal related goals. We go beyond demonstrating purchase preferences as a function of self-construal and identify a specific social norm (communal norm) that accounts for this trade-off under financial constraint. Finally, we identify findings that are counterintuitive to past research in culture, such as under financial abundance or when communal norms are salient, consumer preferences are not aligned with their self-construal.

We present five studies that examine the systematic differences in spending discretionary income on solitary and social purchases under perceived financial constraints and abundance. These studies capture independent and interdependent self-construal across four different countries: United States and United Kingdom, representing independent and India and Hong Kong representing interdependent self-construal. Our findings indicate that under perceived financial constraints, independent (vs. interdependent) consumers are relatively more likely to prefer solitary purchases compared to social purchases (Studies 1–3). However, under perceived financial abundance, independent and interdependent consumers have a similar preference for social and solitary purchases (Study 2). We document the mediating role of communal norms such that interdependent (vs. independent) consumers are more concerned about communal norms when they reflect on their financial constraints, which in turn increases their relative preference for social (versus solitary) purchases (Study 3). In addition, for financially constrained independent consumers, making the communal norm salient reverses the preference for solitary (versus social) purchases (Study 4). Finally, when the communal norm is violated, financially constrained interdependent consumers no longer prefer social purchases, and instead, switch to solitary purchases (Study 5).

Theoretical background

Perceived financial resources

Consumers experience financial constraints as well as abundance routinely and these experiences and perceptions are a function of whether individuals realize that their financial situation restricts or facilitates their desired consumption (Tully et al., 2015). Interestingly, these perceptions may not necessarily correspond to the level of one's absolute wealth. For instance, a recent survey showed that one-quarter of millionaires did not feel wealthy, suggesting that despite being relatively wealthy in an absolute sense, people experience

feelings of financial constraint (Business News Daily, 2020). In this research, we focus on the implications of such perceptions for the trade-offs that consumers make regarding spending their discretionary income on social versus solitary purchases.

Past research has shown that one of the coping strategies that a consumer uses to deal with the limited availability of financial resources is “prioritization” of the goals such that the consumer “decides what is most important, and forgoes less important goals” (Fernbach et al., 2015, p. 1216; Ross et al., 2020). Specifically, Fernbach et al., (2015, Study 2) documented that when faced with financial constraints, consumers modified their plans for holiday gifts by prioritizing their purchases such as eliminating a less important gift or reducing other holiday spending. Also, research has shown that under scarcity, consumers are less likely to consider alternative ways to spend their resources (Shah et al., 2015; Spiller, 2011).

In addition, scarcity perceptions, in general, have been found to engender preference for spending money on oneself more so than on others. Roux et al. (2015) showed that in a charitable behavior context, consumers under scarcity were likely to be selfish. In their investigation, after being exposed to scarcity cues, American participants while allocating money between themselves and anonymous others, showed a marked tendency to be self-focused and decreased generosity towards others. In other words, perception of scarcity leads to “a desire to advance one’s own welfare” (Roux et al., 2015, p. 615). Similarly, consumers who are relatively worse off monetarily are inclined towards self-improvement and are less likely to share their resources with others (Schlosser & Levy, 2016).

In contrast, when consumers are not financially constrained, such abundance provides “considerable freedom and options to consumers” (Van Kerckhove et al., 2020, p. 377). In general, when resources are perceived to be adequate/abundant, the need to prioritize or make trade-offs is significantly reduced. In addition, when consumers have ample resources, they are more likely to consider multiple purchase options (Shah et al., 2015). Hence, consumers may have the freedom and choice to spend the money on multiple options such as on themselves (solitary), share it with significant others (social), engage in gift-giving, or spend it on strangers including charity, depending on what the situation requires. In other words, the tendency to explore multiple options under abundance can thus lead to a similar focus on both social and solitary purchases.

The above review on the implications regarding availability of financial resources suggests that the perceptions of financial constraints and abundance will lead to systematic differences in purchasing decisions. Relevant to our research, financial constraints lead to the prioritization of important

goals at the expense of less important goals, and consumers are less likely to consider alternative ways to spend their resources. In addition, consumers endorse self-related goals and are more likely to be selfish. In contrast, financial abundance engenders minimal prioritization and consumers are more likely to consider multiple purchase options. Intriguingly, the findings related to the focus on and prioritizing of self-goals under financial constraints are based on research conducted predominantly in Western cultures where consumers have been shown to be self-focused. In this research, we suggest that the importance of self versus social goals may vary as a function of consumers’ cultural orientation and to that extent will differentially impact decision making under financial constraints. In the next section, we examine one of the fundamental features that characterize and represent cultural orientation, i.e., self-construal.

Cultural orientation–self-construal

It is widely documented that culture influences consumer and firm behavior (Song et al., 2018). Cultural differences have been attributed to self-construal, the extent to which the person’s view of self across cultures is construed as an individuated or socially embedded entity (Markus & Kitayama, 1991). People with an independent self-construal see themselves as separate from others and place a high value on uniqueness and autonomy. People with an interdependent self-construal perceive themselves as connected to a referent group and place a high value on conformity and strengthening existing relationships. In sum, the self is defined as “separate, distinct, or independent from others” in independent cultures and it “includes others” in interdependent cultures (Markus & Kitayama, 2010, p. 423–24).

Past research highlights that the independent self is chronically accessible in Western cultures whereas the interdependent self is chronically accessible in Asian cultures (Markus & Kitayama, 2010; Riemer et al., 2014). In addition, consumers’ decision making may vary as a function of differences in their self-construal such as in the evaluation of advertising appeals (Han & Shavitt, 1994), perceptions of brand stretchability (Ahluwalia, 2008), price-quality relationship (Lalwani & Shavitt, 2013), relationship with brands (Swaminathan et al., 2007) and product categorization (Jain et al., 2007). These investigations show that in general, consumers’ processing and judgments relating to marketing stimuli and situations are aligned with their self-construal.

However, under specific circumstances, consumers can make decisions that are agnostic of or even counter to their chronic cultural tendencies. Several variables have been identified to moderate the use of such chronic tendencies in decision making such as cultural self-awareness meta-cognition (Lu et al., 2020), optimal distinctiveness (Brewer,

1991), self-affirmation (Lalwani & Shavitt, 2009), and public vs. private consumption (Yamagishi et al., 2008). To illustrate, self-presentation goals have been shown to differ as a function of self-construal such that independent (vs. interdependent) individuals have a greater tendency to present themselves as high on competence and low on social sensitivity (Lalwani & Shavitt, 2009) in accord with their chronic self-construal. However, when the confidence of the individuals in their self-presentation ability was minimized, or if self-presentation goals were satisfied via self-affirmation (Steele & Liu, 1983), individuals were agnostic and no longer engaged in self-presentation goals in line with their chronic self-construal (Lalwani & Shavitt, 2009). Similarly, past research has shown that advertising appeals that are counter to one's chronic self-construal may also be effective (Agrawal & Maheswaran, 2005). Agrawal and Maheswaran (2005) presented two advertising appeals, one aligned with the chronic self-construal and the other counter to it. For example, the appeal reflecting independent self-construal was framed as having self-related benefits (e.g., “be more informed and organized than others”). In contrast, the appeal reflecting interdependent self-construal was framed as having others-related benefits (e.g., “keep in touch with your friends and family”). The findings showed that under low brand commitment, advertising appeal that was counter to the chronic self-construal was effective. Thus, under certain conditions, consumers may not necessarily behave in line with their chronically accessible self.

As discussed above, distinct differences in cultures may exist; driven by independent and interdependent self-construals, these differences may have important downstream consequences across a variety of situations in marketing. In addition, there are specific factors that may lead to behaviors that are not in line with their chronic cultural tendencies for both independent and interdependent consumers. In the next section, we explore normative influences that are part of the cultural architecture and account for such cultural variations (Riemer et al., 2014).

Social norms

Social norms, guidelines that indicate the right thing to do in a specific context, are a significant component of culture that shape consumer behavior (Riemer et al., 2014; Shavitt et al., 2016). Social norms are characterized by prescriptive behavioral rules that highlight the appropriate behavior (Goyal et al., 2020; Morris et al., 2015). While all cultures have social norms, the relevance and salience of social norms in decision-making has been found to vary based on the context and self-construal (Pillutla & Chen, 1999; Riemer et al., 2014). In independent cultures, personal preferences and social norms are considered as disparate and personal preferences are of greater importance in decision making

(Riemer et al., 2014). Social norms are not spontaneously considered and are only incorporated in specific contexts. In interdependent cultures, social norms are integrated with personal preferences and are considered “more central to decision making” (Riemer et al., 2014, p. 623). However, for interdependent cultures, social norms may not always be followed and there are limiting conditions. For instance, Asians tend to behave non-normatively when the differentiation motive is triggered (Kreuzbauer et al., 2014). Specifically, in their investigation, Kreuzbauer et al. (2014) found that when the differentiation motive was salient and when individuals felt that they were very similar to other group members, Asians valued the relational self (norm consistent practice) less. Similarly, a defining feature of an interdependent orientation is that in decision-making, it involves a consideration of the thoughts and judgments of others. However, when interdependents do not anticipate explaining their judgments to others, they are less likely to consider others' beliefs and merely rely on their personal beliefs as a basis for their decisions even when an interdependent self-concept is highly accessible (Torelli, 2006).

The above discussion suggests that social norms are important components of culture that may help to parsimoniously explain cultural variations. Also, cultures may share similar social norms, however, the extent to which these social norms are applied may vary based on the context and also across cultures. While in general interdependent consumers are expected to follow social norms, there are boundary conditions.

Communal norms, cultural variations, and financial decision-making

Relevant to our research, where consumers have to decide whether the financial resources are to be shared with others, social norms related to sharing become a critical element in decision making. A fundamental and universal social norm that guides sharing of resources with significant others such as our parents, children, siblings, life partners, and friends is the social norm of mutual communal sharing (Clark & Mills, 1979; Clark et al., 1998; Fiske, 1992). The social norm of mutual communal sharing (communal norm) is based on the expectation that members in a community will support each other. Specifically, in relationships with significant others, “at the same time one feels obligated to consider the other's welfare, one also feels that the other should take into consideration one's own needs.” (Clark et al., 1998, p. 248). In other words, communal norms highlight the expectation and social appropriateness of sharing with close others and are prevalent in both independent and interdependent cultures.

In the context of financial constraints, independent consumers are less likely to focus on social norms (Sharma

et al., 2014). Even though American consumers consider social appropriateness of morality as a guiding norm, financial scarcity leads them to “relax these standards” (Sharma et al., 2014, p. 92). In their investigation, Sharma et al., (2014, Study 1) documented that when faced with financial deprivation, American consumers tended to cheat for financial gain and were less likely to follow the social norm of moral conduct.

Interdependent consumers, in general, are expected to focus on social norms. Past research has shown that the importance of the community is often strengthened as a result of threats for interdependent consumers (Gelfand, 2019; Gupta & Hagtvedt, 2021; Li et al., 2017; Salvador et al., 2020; Shavitt & Barnes, 2019; Youn et al., 2019). In particular, exposure to threat highlights the benefits of the community and strengthens adherence to communal norms in cultures where community plays a dominant role such as tight and collectivist cultures (Li et al., 2017). In our context, for interdependents, communal norms will be strengthened as a result of financial constraint (threat). In contrast, when there is abundance (no threat of financial constraints), there is less need for community and hence, communal norms are less likely to be considered.

Thus, in the context of financial decision-making, under financial constraints (threat), interdependent consumers are expected to make decisions that are aligned with their self-construal. Specifically, financially constrained interdependent consumers will have greater need for community and are more likely to consider communal norms. However, under financial abundance, since there is no threat, the importance of community will be minimized and communal norms may not be salient in decision-making.

Hypotheses development

Under financial constraints and abundance, how might cultural differences impact the relative preference for social versus solitary purchases? These questions are examined in the financial decision-making context when financial resources are perceived to be either scarce or abundant and across independent and interdependent cultures. Communal norm was also varied and made either salient or not. We discuss our predictions next.

As noted, financial constraints lead to greater prioritization of the individuals’ goals (Ferbach et al., 2015; Ross et al., 2020). From a cultural perspective, we explore the moderating role of self-construal such that independent consumers being self-focused, are more likely to prioritize self-related goals over social goals (Roux et al., 2015) revealing greater preference for solitary purchases. In contrast, in interdependent cultures, the self is viewed as extending

beyond oneself and includes significant others (Markus & Kitayama, 1991). Consistent with this notion, faced with financial constraints, interdependent consumers based on their extended self-view, will prioritize social goals and prefer purchases that include others. Stated formally,

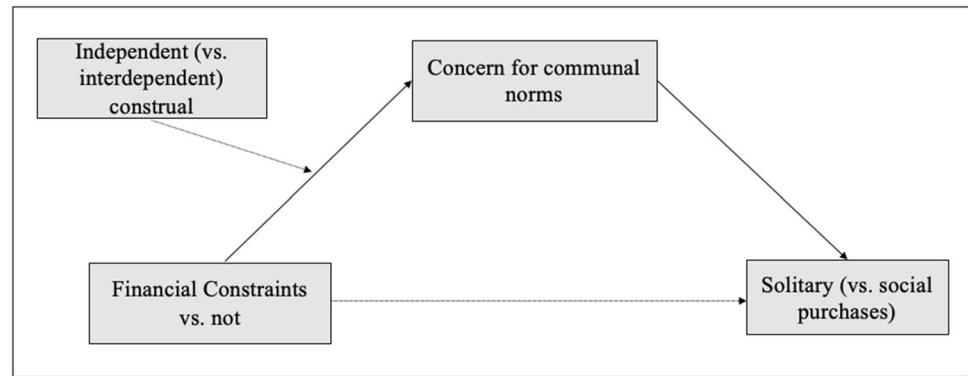
H1a Under perceived financial constraints, independent (vs. interdependent) consumers will have greater relative preference for solitary purchases compared to social purchases (Studies 1, 2, and 3).

When financial resources are abundant, there is no need to prioritize or sacrifice less important goals and consumers should have greater ability to purchase without having to prioritize or make trade-offs (Ferbach et al., 2015). Also, consumers have the tendency to explore multiple options under abundance that can lead to a similar focus on both social and solitary purchases. In addition, as noted earlier, when there is no threat of financial constraints (abundance), there is less need for community for interdependent consumers. In accord, both independent and interdependent consumers will buy for themselves as well as their families and friends when the resources are not limited. This view is consistent with past research that across cultures, social and solitary purchases provide similar happiness (Razavi et al., 2020). We also include a control condition that does not impose any financial constraints (Mehta & Zhu, 2016, Study 1). Hence, under financial abundance as well as in the absence of any financial constraints (i.e., in the control condition), consumers with differing self-construals will have similar preferences for solitary and social purchases.

H1b Under perceived financial abundance, independent and interdependent consumers will have a similar relative preference for solitary purchases compared to social purchases (Study 2).

In terms of the underlying mechanism, we explore under financial constraint, whether social (communal) norms account for the differing preferences in the type of purchases across self-construals. Under financial constraints, because independent consumers emphasize self-goals and personal survival, it is less likely that they use communal norms spontaneously in their decision-making. As noted, financial constraints serve as a threat and exposure to such threat highlights the benefits of the community and strengthens adherence to communal norms for interdependent consumers. Thus, communal norms will play an important role in decision-making for financially constrained interdependent consumers, and consequently, these consumers will prefer social purchases. Therefore,

Fig. 1 Conceptual model



H2 Concern about communal norms will mediate the effect of perceived financial constraints on interdependent consumers' relative preference for social purchases (Study 3).

When will financially constrained independent consumers engage in social purchases? That is an interesting question which has yet to be answered. Since communal norms are predicted to drive social purchases, if communal norms that involve mutual sharing of resources were to be made salient, independent consumers will prefer social purchases because mutual sharing also highlights the benefits to the self. Thus, under financial constraints, when the communal norm is made salient (vs. not salient), greater preference for social purchases will be observed for independent consumers. In contrast, and since communal norms are chronically salient for financially constrained interdependent consumers, it will lead to an overall greater preference for social (vs. solitary) purchases for these consumers.

Finally, another relevant question under financial constraints is, “When will interdependent consumers prefer solitary purchases over social purchases?” As noted, due to their chronic salience of communal norm, financially constrained interdependent consumers will continue to focus on the norm regardless of salience. However, if the expectations underlying such communal norms are violated, and the interdependent consumers learn that in a specific situation, communal sharing may not lead to any further incremental mutual benefit, their focus may shift to the self. In other words, if the social benefit of sharing is dampened through communal norm violation, then the preference for solitary purchases may be enhanced for interdependents. Therefore,

H3 Under perceived financial constraints, independent consumers will have a greater relative preference for social purchases compared to solitary purchases, when the communal norm is made salient (vs. control condition; Study 4).

H4 Under perceived financial constraints, interdependent consumers will have a greater relative preference for solitary purchases compared to social

purchases, when the communal norm is violated (vs. control condition; Study 5).

Across these five studies, we vary specific social and solitary purchases that respondents consider, using respondent-generated as well as standardized options. More importantly, the studies used varied consequential dependent measures including incentive-aligned studies (Studies 2 and 4) to provide supporting and converging evidence for the hypotheses. In sum, we show that perceived financial constraints lead to a preference for solitary versus social purchases and this effect is moderated by self-construal. We also show that communal norms mediate this effect (see Fig. 1).

Study 1: Cultural differences under financial constraints

Study 1 examined whether the perceptions of financial constraints would lead consumers to choose solitary over social purchases and if this effect is moderated by self-construal. Specifically, as predicted in H1a, under perceived financial constraints, we assessed whether independent consumers differ from interdependent consumers in their preference for solitary versus social purchases. In this study, we used chronic, culture-based differences between two countries, the USA and India, to capture independent and interdependent self-construal respectively. In addition, social and solitary purchase categories were respondent-generated.

Method

Participants

Two hundred and seventy-three undergraduate participants (147 American participants at a university in the USA: $M_{\text{age}} = 19.65$, $SD_{\text{age}} = 0.92$, 52.4% females and 126 Indian participants at a university in India: $M_{\text{age}} = 21.35$,

$SD_{age} = 1.08$, 53.2% females) were randomly assigned to either the financial constraints condition or the control condition.

Procedure

Perceptions of financial constraints were manipulated using procedures based on Tully et al. (2015) in which participants were asked to think about various factors that required them to be careful with how they spend their money. They were asked to list the specific aspects of their present circumstances that contributed to their financial constraints (see Appendix A for complete study stimuli). In the control condition, based on past research, to provide an equally cognitively demanding but financially neutral task, participants listed ten facts that they knew were true (Tully et al., 2015, Study 5). Next, respondents were instructed to think about one social and one solitary discretionary purchase that they were likely to make in the next few months. As a solitary purchase, they were asked to think about a discretionary purchase that involved spending money to acquire something to use by themselves or do something by themselves. For social purchase, they were asked to think about a discretionary purchase that involved spending money to acquire something to use with at least one more person or do something with at least one more person (adapted from Caprariello & Reis, 2013). The prices specified in the stimuli across the two countries were equated using purchasing power parity conversion factor (World Bank, 2020). The order of recalling social and solitary purchases was randomly varied for participants. Participants were asked to briefly describe these two purchases. Next, participants were asked to indicate which purchase they were more likely to make if they were able to make only one of the two purchases on a seven-point bipolar scale that was not numbered anchored on “Definitely [solitary purchase]” and “Definitely [social purchase].”

Participants rated the extent to which they felt financially constrained and considered their financial constraints while making their judgments on a seven-point scale (not at all (1)/very much (7); higher number indicated perception of greater financial constraint). These two items were averaged to form a manipulation check index for financial constraints induction ($\alpha = 0.75$). Respondents were then asked to self-categorize the two purchases as being a social purchase (purchase that will involve spending money for yourself and at least one more person) versus a solitary purchase (purchase that will involve spending money only for yourself). Participants also indicated the perceived price of the two purchases using a three-point scale: ([solitary purchase] is cheaper (1)/both are similar in price (2)/[social purchase] is cheaper (3)). Finally, they completed demographic questions on age and gender.

Results

Manipulation check

A 2 (financial perception: financial constraints vs. control) \times 2 (self-construal: USA vs. India) between-subjects ANOVA on the financial constraints manipulation check index confirmed the efficacy of the manipulation. As expected, participants induced to think about financial constraints (vs. control) felt more financially constrained and reported considering financial constraints while making judgments ($M_{FC} = 4.35$, $SD = 1.46$; $M_{Control} = 3.42$, $SD = 1.47$; $F(1, 269) = 27.60$, $p < 0.001$, $\eta_p^2 = 0.09$). No other effects were significant.

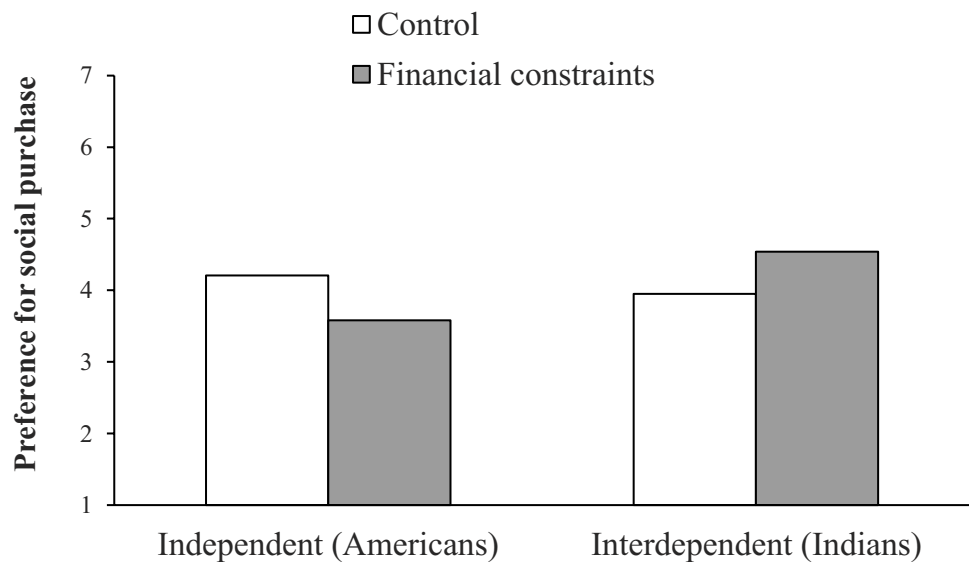
Thirty-five participants stated that the purchase that they reported was not the type of purchase that was requested (i.e., they indicated that their social purchase description was indeed a solitary purchase and/or vice versa). However, excluding these participants did not change the pattern of our results, and hence, we have retained all the participants in our analyses (see Appendix B for details). We also assessed whether the social and solitary purchases were similar in price. Specifically, 67 participants mentioned that their social purchase was cheaper, 69 participants mentioned that their solitary purchase was cheaper, and 137 participants indicated their social and solitary purchases were similar in price. In addition, this control variable, that captured price variations in purchases, was not significantly different from the mid-point of the scale indicating that the prices overall were similar ($M = 1.99$, $SD = 0.71$; versus 2; $t < 1$; see Appendix B for price variations across the two countries).

Purchase preference

Purchase preference was coded such that higher scores indicated a greater preference for social purchase compared to solitary purchase. The 2 (financial perception) \times 2 (self-construal) ANOVA was conducted to test whether reflecting on financial constraints differentially influences preference for solitary versus social purchases as a function of self-construal. Indeed, we found a significant two-way interaction of financial perception condition and self-construal ($F(1, 269) = 6.90$, $p < 0.01$, $\eta_p^2 = 0.03$).

Follow up analyses revealed a significant self-construal effect in the financial constraints condition, suggesting that independent participants preferred solitary (vs. social) purchases compared to interdependent participants ($M_{indep} = 3.58$, $SD = 1.67$; $M_{interdep} = 4.54$, $SD = 1.91$; $F(1, 269) = 8.67$, $p < 0.01$, $\eta_p^2 = 0.03$), supporting H1a. However, no cultural differences were observed in the control condition, indicating that independent and interdependent respondents had similar preference for solitary (compared

Fig. 2 Preference for the consumer generated social (vs. solitary) purchase option by self-construal and experimental condition (Study 1)



to social) purchases at the baseline ($M_{\text{indep}} = 4.21$, $SD = 1.93$; $M_{\text{interdep}} = 3.95$, $SD = 2.10$; $F < 1$).

To further understand the self-construal variations in relative preference for social versus solitary purchases, we separately analyzed the responses of independent and interdependent participants. For independent participants, financial constraints decreased their preference for social purchases such that they had a lower relative preference for social purchases in the financial constraints condition compared to control condition ($F(1, 269) = 3.01$, $p = 0.08$, $\eta_p^2 = 0.01$). In contrast, for interdependent participants, perceived financial constraints increased their preference for social purchases such that they had a greater relative preference for social purchases in the financial constraints condition compared to control condition ($F(1, 269) = 3.97$, $p < 0.05$, $\eta_p^2 = 0.01$; see Fig. 2).

Discussion

Study 1 supported our foundational prediction that under perceived financial constraints, self-construal will predict preference for social versus solitary purchases. Specifically, independent (vs. interdependent) participants had a greater preference for solitary compared to social purchases under financial constraints, supporting H1a. We found these differences occurred since financial constraints caused independent participants to decrease their preference for social (vs. solitary) purchases. Similarly, financial constraints caused interdependent counterparts to increase their preference for social (vs. solitary) purchases. Thus, it appears that under financial constraints, consumers prioritize their purchases in accord with their self-construal such as independents prefer more solitary purchases and interdependents prefer more social purchases.

Another interesting finding that emerged from this study is related to the control condition. In the control condition, independent and interdependent participants exhibited similar preference for solitary and social purchases. This finding may seem to be at odds with the culture-based expectation that independent cultures are focused predominately on the self and interdependent cultures on others. However, it is likely that in the absence of any constraint, consumers could engage in solitary and social purchases equally. In other words, financial constraints force consumers to prioritize, and when they are not present, consumers are free to choose either solitary or social purchases regardless of their self-construal.

We tested this intuition in the next study by explicitly examining the view that in the absence of financial constraints, consumers do not prioritize their goals and consequently, engage equally in solitary and social purchases. We expect that the findings in the absence of financial constraints condition (i.e., control condition) will be similar to the financial abundance condition since consumers perceive that “resources in the world in general are abundant rather than scarce” (Mehta & Zhu, 2016, p. 779). Thus, consumers in the control condition will be in line with consumers in the financial abundance condition. We also explore the robustness of the self-construal related variations in the preference for solitary and social purchases by manipulating self-construal.

Study 2: Cultural differences—underlying construct

In Study 1, the specific countries from which the participants came represented their chronically accessible self-construal. In Study 2, we manipulated independent and interdependent

self-construals among American participants. We expect that under financial constraints, consumers with independent (vs. interdependent) self-construal will show lower relative preference for social purchases (H1a).

In Study 1, discretionary purchase options included a range of purchases that were individually selected by each participant. However, it can be argued that participants reflecting on financial constraints may tend to consider diverse varieties of purchase options (e.g., more appealing solitary purchases and less appealing social purchases) compared to participants in the control condition. In Study 2, all respondents considered the same purchase choice. In addition, participants were asked to make incentive-compatible choice such that they were told that some of them would receive a gift card for their chosen option.

Method

Participants

Three hundred and eighty undergraduate participants at a US university ($M_{age} = 20.09$, $SD_{age} = 0.95$, 53.2% females) completed the study for partial course credit. They were randomly assigned to a 3 (financial perception: financial constraints vs. financial abundance vs. control) \times 2 (self-construal: independent vs. interdependent) design.

Procedure

Participants were randomly presented with one of the three conditions- financial constraints, financial abundance, or control condition. Participants in the financial constraints and control conditions were presented with the same prompt as in Study 1. In contrast, in the financial abundance condition, participants were asked to think about various factors that contributed to their financial abundance and allowed them to spend as much money as they wanted on the items of their interest.

After responding to the financial perception induction, self-construal was manipulated based on past research (adapted from Trafimow et al., 1991). Specifically, participants read a story about a dilemma that the president of Marathon Sports Club faced in selecting a marathon runner. In the independent condition, the president reflected on benefits for himself such as increasing his prestige and selected the most talented marathon runner as his recommendation. In the interdependent condition, the president reflected on benefits for his own club such as enhancing his club's prestige and selected a member of his club as his recommendation. After reading the story, as a manipulation check for self-construal, participants indicated the extent to which the president thought (i) about himself

and (ii) about his own club on seven-point scales (not at all (1)/a lot (7); adapted from Hong & Chang, 2015). A self-construal manipulation check index was calculated by subtracting how much the president thought about his club from how much the president thought about himself; higher scores on the index indicated that the president thought more about himself than his club.

Participants were then asked to complete a shopping task that required them to indicate their incentive compatible purchase choice. Specifically, they were asked to choose a purchase option that they could actually receive. They were told that all participants would enter a lottery and two of the winners would receive the gift card that they had selected. The task comprised of choosing between a solitary purchase (i.e., Disney Gift Card worth \$ 25 to buy merchandise for yourself) and a social purchase (i.e., Chipotle Gift Card worth \$ 25 to buy a meal for yourself and your roommate). These gift cards were selected based on a pretest that indicated that Disney Gift Card to buy merchandise for yourself and Chipotle Gift Card to buy a meal for yourself and your roommate were equivalent in their favorability and anticipated happiness (see details in Appendix C). Participants indicated whether they would like to make social versus solitary purchase using a binary response option.

Respondents then rated the extent to which they felt financially constrained and considered their financial constraints while making their judgments on a seven-point scale (not at all (1)/very much (7)). These two items were averaged to form a financial constraints manipulation check index ($\alpha = 0.84$). Participants also rated the extent to which they felt that they had adequate financial resources and the extent to which they considered their adequate financial resources while making their judgments, also on a seven-point scale (not at all (1)/very much (7)). These two items were averaged to form a financial abundance manipulation check index ($\alpha = 0.78$). Finally, respondents completed demographic questions including age and gender.

Results

Manipulation check

A 3 (financial perception) \times 2 (self-construal) between-subjects ANOVA on the financial constraints manipulation check index showed only a main effect of financial perception ($F(1, 374) = 24.57$, $p < 0.001$, $\eta_p^2 = 0.12$). As expected, planned contrasts confirmed that participants in the financial constraints condition scored higher on financial constraints manipulation check index compared to those in the financial abundance condition ($M_{FC} = 4.63$, $SD = 1.43$; $M_{FA} = 3.28$, $SD = 1.55$; $F(1, 374) = 44.34$, $p < 0.001$, $\eta_p^2 = 0.11$) and the control condition ($M_{Control} = 3.58$, $SD = 1.70$; $F(1, 374) = 28.84$, $p < 0.001$,

$\eta_p^2=0.07$). In addition, participants in the financial abundance condition did not differ from participants in the control condition on the financial constraints manipulation check index ($p>0.10$). A similar 3×2 ANOVA that was conducted on the financial abundance manipulation check index revealed only a main effect of financial perception ($F(1, 374)=23.99, p<0.001, \eta_p^2=0.11$). Participants in the financial abundance condition scored higher on the financial abundance manipulation check index compared to financial constraints condition respondents ($M_{FA}=4.95, SD=1.29; M_{FC}=3.79, SD=1.50; F(1, 374)=43.19, p<0.001, \eta_p^2=0.10$). In addition, participants in the financial abundance condition did not differ from those in the control condition on financial abundance manipulation check index ($M_{Control}=4.70, SD=1.30; p>0.10$).

To confirm the efficacy of self-construal manipulation, 3×2 ANOVA was conducted on the self-construal manipulation check index. Recall that higher scores on the index indicated that the president thought more about himself rather than his club. The analyses yielded only a main effect of self-construal ($F(1, 374)=95.82, p<0.001, \eta_p^2=0.20$). As expected, participants in the independent self-construal condition stated that the president thought more about himself and less about his club compared to participants in the interdependent self-construal condition ($M_{indep}=1.44, SD=1.98$ vs. $M_{interdep}=-0.42, SD=1.65$).

Purchase preference

Purchase preference was coded such that higher percentages indicated a greater tendency to choose social purchase compared to solitary purchase. A logistic regression on the choice of social versus solitary purchase (0=solitary purchase; 1=social purchase) with financial perception and self-construal as categorical predictors revealed an interaction between financial perception and self-construal (Wald's $\chi^2(2, N=380)=14.80, p<0.01$). In the financial constraints condition, independent participants (32.3%) were less likely to choose social (vs. solitary) purchase compared to interdependent participants (67.8%; $\chi^2(1, N=121)=15.61, p<0.001$), further supporting H1a. In the financial abundance condition, independent (56.5%) and interdependent participants (48.3%) did not vary in their purchase choices ($\chi^2(1, N=120)=0.80, p=0.37$), supporting H1b. In the control condition as well, independent (55.7%) and interdependent participants (49.3%) did not vary in their purchase choices ($\chi^2(1, N=139)=0.58, p=0.45$).

In addition, as in Study 1, to further understand self-construal variations, we separately analyzed independent and interdependent participants. As expected, independents were less likely to choose social purchases in the financial constraints condition compared to the control condition ($\chi^2(1, N=132)=7.41, p<0.01$). Similarly, independents were less likely to choose social purchases in the financial

constraints condition compared to the abundance condition ($\chi^2(1, N=124)=7.43, p<0.01$). In contrast, interdependents were more likely to choose social purchases in the financial constraints condition compared to the control condition ($\chi^2(1, N=128)=4.52, p<0.05$). Similarly, interdependents were more likely to choose social purchases in the financial constraints condition compared to the abundance condition ($\chi^2(1, N=117)=4.61, p<0.05$).

Discussion

Study 2's findings converged with those of Study 1 while providing additional support for our prediction by manipulating independent and interdependent self-construals and using a different operationalization of social and solitary purchases. In aggregate, the two studies establish that independent (vs. interdependent) consumers are more likely to make solitary compared to social purchases under perceived financial constraints (H1a). Under such conditions, independent consumers decrease their preference for social purchases whereas interdependent consumers increase their preference for social purchases. This study also provides convergent evidence that when financial resources are perceived to be limited, consumers appear to prioritize their spending in accord with their self-construal such as independents prioritize solitary purchases and interdependents prioritize social purchases. This study also shows that independents and interdependents do not vary in their choices under financial abundance condition (H1b).

Study 3: Mediating role of communal norms

The objective of Study 3 is to explore the underlying mechanism for these differential preferences among independent and interdependent consumers by testing the mediating role of communal norms. As detailed in H2, we anticipate that under perceived financial constraints, interdependent (vs. independent) consumers are more likely to think about communal norms, which in turn will increase relative preference for social purchases. In addition, to enhance the generalizability of the findings, this study was conducted in different countries with chronic independent (i.e., UK) and chronic interdependent (i.e., Hong Kong) self-construal.

Method

Participants

Seven hundred and ninety-five undergraduates participated in the study. 402 undergraduate participants from the UK were

recruited from Prolific Academic¹ to complete the study for monetary compensation ($M_{\text{age}} = 23.56$, $SD_{\text{age}} = 7.40$, 65.9% females) and 393 undergraduate participants from a university in Hong Kong completed the study for course credit ($M_{\text{age}} = 19.94$, $SD_{\text{age}} = 1.51$, 59.3% females).

Procedure

Procedure of this study was similar to Study 1 except for the following two changes. First, after responding to the purchase preference question, participants responded to three items that captured the concern for communal norms on a seven-point scale (not at all (1)/very much (7)). Specifically, participants rated the extent to which (i) they thought that close relatives and friends should support each other (ii) they should share what they have with others and hope others also did the same (iii) they should live in a community where everybody cared for each other's welfare. These three items were averaged to form a concern for communal norm index ($\alpha = 0.79$). Second, at the end of the study, participants completed the self-construal scale to measure chronic differences in self-construal among participants from the UK and Hong Kong (Singelis, 1994). Consistent with past research, a self-construal index was calculated by subtracting the interdependent scale ($\alpha = 0.82$) average from the independent scale ($\alpha = 0.80$) average (Hong & Chang, 2015; Singelis, 1994). Higher scores on the index indicated a greater independent self-construal compared to interdependent self-construal orientation.

Results

Manipulation check

A 2 (financial perception: financial constraints vs. control) \times 2 (self-construal: UK vs. Hong Kong) between-subjects ANOVA on the financial constraints manipulation check index ($\alpha = 0.78$) confirmed the success of the manipulation. Participants induced to think about financial constraints (vs. control) felt more financially constrained and reported thinking more about financial constraints ($M_{\text{FC}} = 4.71$, $SD = 1.36$; $M_{\text{Control}} = 3.76$, $SD = 1.48$; $F(1, 791) = 88.58$, $p < 0.001$, $\eta_p^2 = 0.10$). A similar 2 \times 2 ANOVA on the self-construal scale index confirmed that participants

in UK and Hong Kong varied on their chronic self-construal. As expected, participants in UK had a higher score on self-construal scale index than participants in Hong Kong, indicating that UK participants were more likely to have an independent (vs. interdependent) self-construal orientation compared to Hong Kong participants ($M_{\text{UK}} = 0.38$, $SD = 1.06$; $M_{\text{HongKong}} = -0.25$, $SD = 0.82$; $F(1, 791) = 90.26$, $p < 0.001$, $\eta_p^2 = 0.10$).

Eighty-two participants stated that the purchase that they reported was not of the type of purchase that was requested (i.e., they indicated that their social purchase description was indeed a solitary purchase and/or vice versa). However, excluding these participants did not change the pattern of our results, and hence, we have retained all the participants in our analyses (see Appendix D for details). We also assessed whether the social and solitary purchases were similar in price. Specifically, 208 participants mentioned that their social purchase was cheaper, 217 participants mentioned that their solitary purchase was cheaper, and 370 participants indicated that their social and solitary purchases were similar in price. In addition, this control variable that captured price variations in purchases, was not significantly different from the mid-point of the scale (indicating the prices overall were similar; $M = 1.99$, $SD = 0.73$; vs. 2; $t < 1$; see Appendix D for price variations across the two countries).

Purchase preference

Similar to Study 1, purchase preference was coded such that higher scores indicated a greater preference for social purchase compared to solitary purchase. The 2 \times 2 ANOVA was conducted to test whether reflecting on financial constraints led to differences in independent and interdependent participants' preference for solitary (vs. social) purchases. We found a main effect of self-construal ($F(1, 791) = 13.08$, $p < 0.001$, $\eta_p^2 = 0.02$) and a significant two-way interaction of financial perception condition and self-construal ($F(1, 791) = 11.48$, $p < 0.01$, $\eta_p^2 = 0.01$). Follow up analyses revealed a significant self-construal effect in the perceived financial constraints condition, suggesting that independent participants preferred solitary (vs. social) purchase compared to interdependent participants when they reflected on financial constraints ($M_{\text{indep}} = 3.33$, $SD = 1.96$; $M_{\text{interdep}} = 4.35$, $SD = 2.04$; $F(1, 791) = 24.21$, $p < 0.001$, $\eta_p^2 = 0.03$), further supporting H1a. However, there were no self-construal differences in the control condition, denoting that independent and interdependent respondents had similar preference for social (compared to solitary) purchase at baseline ($M_{\text{indep}} = 3.88$, $SD = 2.14$; $M_{\text{interdep}} = 3.92$, $SD = 2.05$; $F < 1$). Similar to earlier studies, we also analyzed independent and interdependent participants separately. Specifically, for independent participants, perceived financial constraints decreased their preference for social purchases such that they

¹ The selection criteria for who could take our study was chosen such that only UK residents who were enrolled in an undergraduate program could participate in the study. The selection criteria for Study 4 was chosen such that only US residents who had annual household income less than \$40,000 could participate in the study. The selection criteria for Study 5 was chosen such that only US residents who had 95% approval rate on mTurk and did not use virtual private network (Winter et al., 2019) could participate in the study.

had a lower relative preference for social purchases in the financial constraints condition compared to the control condition ($F(1, 791) = 7.36, p < 0.01, \eta_p^2 = 0.01$). In contrast, for interdependent participants, perceived financial constraints increased their preference for social purchases such that they had a greater relative preference for social purchases in the financial constraints condition compared to the control condition ($F(1, 791) = 4.34, p < 0.05, \eta_p^2 = 0.01$).

Mediation

The 2×2 ANOVA examined whether reflecting on financial constraints led to differences in independent and interdependent participants' consideration of communal norms while decision making. The results showed a main effect of self-construal ($F(1, 791) = 22.25, p < 0.001, \eta_p^2 = 0.03$) and a significant two-way interaction of financial perception and self-construal ($F(1, 791) = 8.92, p < 0.01, \eta_p^2 = 0.01$). Follow up analyses revealed a significant self-construal effect in the financial constraints condition, suggesting that independent participants thought less about communal norms while decision making compared to interdependent participants when they reflected on financial constraints ($M_{\text{indep}} = 4.84, SD = 1.20; M_{\text{interdep}} = 5.46, SD = 1.18; F(1, 791) = 29.29, p < 0.001, \eta_p^2 = 0.04$). However, there were no self-construal differences in the control condition, denoting that independent and interdependent respondents did not vary in their consideration of communal norms at baseline ($M_{\text{indep}} = 5.02, SD = 1.05; M_{\text{interdep}} = 5.16, SD = 1.07; F(1, 791) = 1.52, p = 0.22$). We also analyzed independent and interdependent participants separately. Specifically, analyses based on independent participants revealed that perceived financial constraints marginally decreased their consideration of communal norms in decision making ($M_{\text{Control}} = 5.02, SD = 1.05; M_{\text{FC}} = 4.84, SD = 1.20; F(1, 791) = 2.67, p = 0.10$). Similarly, analyses based on interdependent participants revealed that perceived financial constraints increased their consideration of communal norms in decision making ($M_{\text{Control}} = 5.16, SD = 1.07; M_{\text{FC}} = 5.46, SD = 1.18; F(1, 791) = 6.68, p < 0.05, \eta_p^2 = 0.01$).

Further, we performed a moderated mediation analysis to test the underlying path for interdependents, i.e., financial constraints (vs. control condition) would lead to greater concern for communal norms and hence would result in a higher relative preference for social purchases. We employed PROCESS Model 7 (5,000 bootstrap samples; Hayes, 2018) where we used financial perception condition as the predictor, self-construal as the moderator, the concern for communal norm index as the mediator, and purchase preference as the dependent variable. The indirect effect was significant ($\beta = 0.17, SE = 0.07, 95\% \text{ CI } [0.05, 0.32]$),

confirming the mediating role of concern for communal norms. As expected, concern for communal norms significantly mediated the effect of financial constraints on purchase preferences for interdependent participants (95% CI 0.02 to 0.20) indicating that financial constraints increased the concern for social norms and to that extent increased the relative preference for social purchases, supporting H2. For independent participants, concern for communal norms appears to marginally mediate the effect of financial constraints on purchase preferences at 90% confidence interval (-0.14 to -0.00). Together, the findings indicated that for interdependent participants, reflecting on financial constraints led to greater preference for social (vs. solitary) purchases due to their increased concern for communal norms.

Discussion

Results from Study 3 converged with our earlier studies establishing the robustness of the findings. Study 3 provided additional support for our prediction by featuring different countries with chronic independent and interdependent self-construals. Study 3 findings provided further support for our premise that when thinking about financial constraints, independent (vs. interdependent) consumers are more likely to make solitary purchases compared to social purchases (H1a). More importantly, Study 3 documented the mediating role of the communal norm such that interdependent consumers are more likely to think about the communal norm when they thought about their financial constraints, which in turn will increase their relative preference for social over solitary purchases. However, for independent participants, there was only a marginally significant result such that reflecting on financial constraints led to decreased preference for social (vs. solitary) purchases due to their decreased concern for communal norms.

Study 4: Independent consumers—preference for social purchase

Study 4 is designed to test the proposition that for independents, financial constraints can lead to social purchases when communal norm is salient. As noted, this is because communal norms involve mutual sharing and highlight the personal benefits to the individual. For increased generalization, we (a) recruited participants only from low-income levels (with annual household income below \$40,000; Carvalho et al., 2016), (b) used a different self-construal manipulation (Gardner et al., 1999), and (c) employed a different incentive-aligned dependent variable.

Method

Participants

Six hundred and one participants ($M_{\text{age}} = 34.23$, $SD_{\text{age}} = 13.48$, 49.6% females) completed the study on Prolific Academic in exchange for a small monetary compensation. Participants were randomly assigned to a 2 (self-construal: independent vs. interdependent) \times 2 (norm salience condition: norm salience vs. control) design.

Procedure

All participants were asked to think about their financial condition in general and hence were not forced to think only about their financial constraints (Tully et al., 2015, Study 4). After describing their financial condition, participants were presented with an advertising study that manipulated their self-construal in accordance with past research (Gardner et al., 1999). Specifically, participants were asked to read a story and visualize themselves in it. The story was either written in self-directed singular pronoun (e.g., I) or in all-encompassing plural pronoun form (e.g., We; Brewer & Gardner, 1996; Sinha & Lu, 2016). After reading the story, participants completed the two items for self-construal manipulation check. They rated the extent to which they thought (i) about themselves and (ii) about others (e.g., friends, family, etc.) while reading the story on seven-point scales (1 = not at all, 7 = a lot; Duclos & Barasch, 2014). A self-construal manipulation check was calculated by subtracting thoughts about others from thoughts about themselves such that higher scores on the index indicated that participants thought more about themselves than others.

In a purportedly unrelated task, participants then took part in a “Scenario Study” that manipulated the salience of communal norm (pretest detailed in Appendix E). Participants were told that they will be presented with a scenario that was likely to happen to them. In the norm salience condition, participants read that their friend shared what he had with his neighbors. Specifically, their friend asked his neighbor to share his BBQ grill and later shared his portable speaker with the neighbor. In contrast, the control condition described that participants saw their neighbor barbecuing and listening to music on portable speaker. Participants then rated the extent to which the scenario highlighted the three items that were used to assess the efficacy of communal norm salience manipulation (e.g., “You should be friendly and wish your neighbors are also friendly with you”; see Appendix A). These three items were averaged to form a norm salience manipulation check index ($\alpha = 0.75$).

After responding to the manipulation check items, participants were asked to complete a shopping task that required them to indicate their purchase choice that was incentive

compatible. Specifically, they were told that all participants would enter a lottery and two of the winners would receive a gift card for the purchase choice that they had selected. The task comprised of choosing between a solitary purchase (i.e., Netflix Gift Card worth \$ 25 to buy a subscription for yourself) and a social purchase (i.e., Starbucks Gift Card worth \$ 25 to buy coffee for yourself and your friends). This pair of purchase options was selected based on a pretest (detailed in Appendix E). Participants indicated whether they would like to receive social versus solitary purchase using a binary response option.

Financial constraint was measured similar to earlier studies with participants rating the extent to which they felt financially constrained and considered their financial constraints while making their judgments. These two items were averaged to form a financial constraints index ($\alpha = 0.67$). Lastly, respondents completed demographic questions including age and gender.

Results

Manipulation check

We conducted 2 (self-construal) \times 2 (norm salience condition) between-subjects ANOVA on the self-construal manipulation check index to check the effectiveness of the self-construal manipulation. Recall that higher scores on the index indicated that participants thought more about themselves rather than others. The analyses yielded only a main effect of self-construal ($F(1, 597) = 40.50$, $p < 0.001$, $\eta_p^2 = 0.06$). As expected, participants in the independent self-construal condition stated that they thought more about themselves and less about others compared to participants in the interdependent self-construal condition ($M_{\text{indep}} = 0.71$, $SD = 2.01$ vs. $M_{\text{interdep}} = -0.26$, $SD = 1.72$). Similarly, to confirm the efficacy of norm salience manipulation, we conducted 2 \times 2 ANOVA on the norm salience manipulation check index. As expected, participants in the norm salience (vs. control) condition scored higher on norm salience manipulation check index ($M_{\text{NS}} = 5.79$, $SD = 1.06$; $M_{\text{Control}} = 5.34$, $SD = 1.13$; $F(1, 597) = 25.32$, $p < 0.001$, $\eta_p^2 = 0.04$). In addition, a t-test was conducted on the financial constraints index. When low-income level participants thought about their financial condition, they felt financially constrained and reported thinking about financial constraints while making their judgments as the mean of financial constraints index was greater than the mid-point of the scale ($M = 4.42$, $SD = 1.78$; vs. 4; $t(600) = 5.85$, $p < 0.001$).

Purchase preference

Purchase preference was coded such that higher percentages indicated a greater tendency to choose social purchase

compared to solitary purchase. A logistic regression on the choice of social versus solitary purchase (0 = solitary; 1 = social purchase) revealed an interaction between self-construal and norm salience condition ($B = -0.88$, $SE = 0.34$, Wald's $\chi^2(1, N = 601) = 6.75$, $p < 0.01$). As expected, low-income level independents were more likely to choose social (vs. solitary) purchases in the norm salience condition (63.1%) compared to the control condition (40.4%; $\chi^2(1, N = 287) = 14.95$, $p < 0.001$). In contrast, low-income level interdependents had similar choice for social (vs. solitary) purchases across the norm salience (65.5%) and control conditions (64.4%; $\chi^2(1, N = 314) = 0.04$, $p = 0.85$). In addition, it appears that for the low-income level consumers, making norms salient raises the choice percentage of independents (63.1%) to be in level with interdependents (65.5%; $\chi^2(1, N = 306) = 0.18$, $p = 0.67$).

Discussion

Study 4 examined hypothesis 3 specifically for low-income level participants. As anticipated, we found that making communal norm salient increases low-income level independent consumers' relative preference for social purchases when they thought about their financial condition. Thus, when communal norm is made salient for independent consumers, they are more willing to make social purchases since it highlights benefit to the self. This finding is consistent with past research showing that in independent cultures, scarcity led to other-focused behaviors when such behaviors allowed for personal gains (Roux et al., 2015). In addition, Study 4 generalizes the findings to consumers with low-income levels, across different self-construal manipulation and different operationalization of incentive-aligned social and solitary purchases.

Study 5: Interdependent consumers—preference for solitary purchase

We argue that interdependent consumers have a relative preference for social purchases compared to solitary purchases since financial constraints lead to increased concern for communal norms. Study 5 is designed to test the proposition for interdependent consumers that financial constraints can lead to solitary purchases when communal norms are violated. In addition, we used a different operationalization of social and solitary purchase options where participants were provided with a situation that kept the goal of the purchase same and presented a purchase choice pair that featured a solitary purchase option and a social purchase option that could fulfill the purchase goal. This study also used a behavioral measure of purchase preferences—participant's website visits.

Method

Participants

Five hundred and eighty three mTurk participants ($M_{age} = 41.88$, $SD_{age} = 13.57$, 51.8% females) were randomly assigned to a 2 (self-construal: independent vs. interdependent) \times 2 (norms violation condition: norm violation vs. control) design.

Procedure

All participants were presented with the financial constraints condition, similar to Studies 1, 2, and 3. After responding to this induction, participants responded to the same self-construal manipulation and manipulation checks as Study 2. In a purportedly unrelated part of the study, participants took part in a "writing task" that manipulated social norms violation (pretest detailed in Appendix F). In the norms violation condition, participants were first asked to think about the person(s) with whom they share a close emotional bond (Mcgraw et al., 2003). Participants were then asked to think about a recent situation when this person(s) did not share with them or support them and the participants realized that they had to take care of themselves in that situation. In the control condition, they were asked to think about their relationship with other people and think of a recent situation in which they interacted with another person. Participants then completed manipulation checks for social norms violation using three items: (i) "To what extent did you feel betrayed by others in the situation?" (ii) "To what extent did you feel disappointed by others in the situation?" (iii) "To what extent did you feel taken advantage of by others in the situation?" These three items were answered on a seven-point scale (not at all (1)/very much (7)) and were averaged to form a norms violation manipulation check index ($\alpha = 0.93$).

Participants were then asked to complete a shopping task. In this task, participants responded to a hypothetical scenario that asked respondents to imagine that they had set aside \$100 for their sports interests. Participants were provided with two ways in which they could fulfill the purchase goal—a solitary purchase i.e., sports equipment to enjoy by themselves (e.g., a sports bike or skates) and a social purchase i.e., sports equipment to enjoy with others (e.g., a pair of tennis rackets or soccer ball). These purchase choices were selected based on the pretest that indicated that these two types of sports equipment were equivalent in their favorability and anticipated happiness at purchase (see details in Appendix F). Participants indicated their likelihood of buying between the two choices on a seven-point bipolar scale that was not numbered anchored on "More likely to buy sports equipment to enjoy by themselves" and "More likely to buy sports equipment to enjoy with others." Subsequently, we administered behavioral measures of

purchase preferences: participant website visits. As a behavioral measure of their relative preference for buying solitary purchases, we asked participants whether they would like to visit a website featuring various *solitary sports* and their corresponding equipment (no(0)/yes(1)).

In addition, we designed four identical Google websites, one website for each of the four conditions. These websites presented information on the gear required for different *solitary sports* collated from actual sporting goods retail websites. We tracked separately how many views each of the four websites received using Google Analytics (Tully & Sharma, 2018, Study 4).

Results

Manipulation check

We conducted 2 (self-construal) \times 2 (norms violation condition) between-subjects ANOVA on the self-construal manipulation check index to check the effectiveness of the self-construal manipulation. The results yielded only a main effect of self-construal ($F(1, 579) = 140.08, p < 0.001, \eta_p^2 = 0.20$). As expected, participants in the independent self-construal condition stated that the president thought more about himself and less about his club compared to participants in the interdependent self-construal condition ($M_{\text{indep}} = 0.94, SD = 2.23$ vs. $M_{\text{interdep}} = -1.03, SD = 1.78$). Similarly, to confirm the efficacy of norm violation manipulation, we conducted 2 \times 2 ANOVA on the norm violation manipulation check index. As expected, participants induced to think about norm violation (vs. control condition) scored higher on norm violation manipulation check index ($M_{\text{NV}} = 5.24, SD = 1.44; M_{\text{Control}} = 2.59, SD = 2.02; F(1, 579) = 327.28, p < 0.001, \eta_p^2 = 0.36$). In addition, a t-test was conducted on the financial constraints index ($\alpha = 0.76$). As expected, participants felt financially constrained and reported thinking about financial constraints while making their judgments as the means were greater than the mid-point of the scale ($M = 4.73, SD = 1.67; \text{vs. } 4; t(582) = 10.56, p < 0.001$).

Purchase preference

The 2 \times 2 ANOVA was conducted to test whether norm violation increased interdependents' relative preference for solitary purchases under perceived financial constraints. Indeed, we found a main effect of self-construal ($F(1, 579) = 4.56, p < 0.05, \eta_p^2 = 0.01$) and a significant two-way interaction of self-construal and norm violation condition ($F(1, 579) = 6.10, p < 0.05, \eta_p^2 = 0.01$). Follow up analyses revealed financially constrained interdependent participants had higher relative preference for solitary

versus social purchase in the norm violation condition compared to control condition ($M_{\text{NV}} = 4.06, SD = 2.15; M_{\text{Control}} = 4.83, SD = 2.01; F(1, 579) = 9.15, p < 0.01, \eta_p^2 = 0.02$), supporting H4. In contrast, financially constrained independent participants had similar relative preference for solitary purchases across the norm violation condition and control condition ($M_{\text{NV}} = 4.12, SD = 2.21; M_{\text{Control}} = 4.01, SD = 2.21; F < 1$).

Exploratory behavioral measures

We next examined the interactive impact of self-construal and norm violation condition on participants' request for viewing the solitary sports website (0 = no; 1 = yes). The results showed a significant self-construal and norm violation interaction ($B = 0.89, SE = 0.36, \text{Wald's } \chi^2(1, N = 583) = 6.12, p < 0.05$). Consistent with our predictions, in the interdependent condition, a greater proportion of participants indicated that they wanted to view the solitary sports website under norms violation condition (37.2%) compared to control condition (22.7%; $\chi^2(1, N = 287) = 7.31, p < 0.01$). However, in the independent condition, similar proportion of participants selected that they wanted to view the solitary sports website under norms violation condition (33.3%) and the control condition (37.5%; $\chi^2(1, N = 296) = 0.56, p = 0.45$).

Results for actual visits to the solitary sports website were in line with the results for the website request measure. The association between self-construal and norm violation was not significant ($\chi^2(1) = 1.53, p = 0.22$). However, the means were directionally consistent with our predictions. In the interdependent condition, 13.9% of participants viewed the solitary sports website under norms violation condition compared to 6.7% participants under the control condition. However, in the independent condition, 16.7% of participants visited the solitary sports website under norms violation condition and 15.1% of participants visited the website under the control condition.

Discussion

Study 5 finds support for hypothesis 4 using a different operationalization of solitary and social purchases. Specifically, when communal norms are violated, it increased interdependent consumers' relative preference for solitary purchases under perceived financial constraints.

General discussion

This research shows that perceived level of financial resources influences how consumers spend discretionary income on solitary versus social purchases. We highlight

that self-construal determines when financially constrained consumers engage in solitary versus social purchases trade-off. Across five studies using different purchase choices, we demonstrate that, when financially constrained, independent consumers prefer solitary purchases whereas interdependent consumers prefer social purchases (see Appendix G for single paper meta-analysis). To enhance generalization, we show these effects across different manipulations of financial constraints and self-construal. More importantly, to enhance ecological validity, we also use consequential dependent measures such as incentive-aligned measures.

Theoretical contribution

Our findings contribute to the literature on financial decision-making and self-construal differences. In the financial decision-making domain, our primary contribution is to identify a novel coping strategy that consumers rely on to manage scarce financial resources. Past research has shown that financial constraints make the longevity or the durability of the purchase more salient and hence, consumers prefer material goods over short-lived experiences (Tully et al., 2015). We add to Tully et al.'s (2015) findings by identifying yet another important tradeoff between solitary versus social discretionary purchases that consumers make when they have limited resources. Specifically, we show that consumers prioritize their self-related goals and prefer solitary over social purchases. However, the prioritization of goals differs as a function of their self-construal. In general, independent consumers focus on themselves and choose solitary (versus social) purchases. In contrast, interdependent consumers are more likely to also consider others and choose social (versus solitary) purchases. We also explore the findings in financial abundance condition and show that consumers do not engage in prioritization and express a preference for both solitary and social purchases.

Financially constrained consumers are likely to be selfish in a charitable behavior context that involves anonymous others (Roux et al., 2015). We endorse as well as extend Roux et al.'s (2015) finding in a different context, discretionary purchase, and a different decision scenario that involves significant (versus anonymous) others. While Roux et al. (2015) have not specifically focused on cultural differences, we endorse that the self-focus of independent Americans (and UK citizens) leads to a greater preference for solitary versus social purchases under financial constraints. We also extend this finding by identifying self-construal as a moderator of this “selfish” effect. Specifically, we show that while the selfish effect is robust for independent consumers, this effect is mitigated in the interdependent culture where consumers prefer social purchases involving others. More interesting, we also reverse the selfish effect for independent consumers under financial constraints. We show that making

communal norm salient can make independents share their limited resources with others.

Extant research has shown that financially constrained (independent) consumers do not follow norms related to morality (Sharma et al., 2014). We extend Sharma et al.'s findings (2014) by identifying that when communal norm is made salient, it underscores the social benefit to the self by mutual sharing, and hence, independent consumers use communal norms in their decision-making.

In the area of self-construal, we identified financial decision making as another area where self-construal differences are informative. We also document an interesting variation from past research on cultural differences. While past research will predict the main effect of self-construal such that independents and interdependents will vary in their preference for solitary versus social purchases regardless of their financial constraints, our research highlights that only under financial constraints, self-construal differentially impacts purchase preferences. Perceived financial abundance, in contrast, has no systematic impact on purchase preferences across self-construals.

One potential limitation of our study could be that our mediator, communal norm, is conceptually close to the moderator–self-construal. Communal norm was selected as the mediator in this research because (a) the focus of our paper is on cultural differences and communal norms are significant component of culture that shape behavior, and (b) while self-construal is the moderator, we wanted to be more precise in identifying the specific component of self-construal that drives the hypothesized effects. Since we examine “sharing resources with significant others” as our context, we selected a fundamental and universal social norm, that is meaningful and guides communal sharing behavior, and is present in independent as well as interdependent cultures.

While we found some evidence for independent consumers that decreased consideration of communal norms mediated the effect of financial constraints on decreased preference for social purchases, we also speculate on a potential alternate process based on self-sufficiency. Based on the past research, financially constrained consumers in independent cultures focus on self-sufficiency for survival (Cohen, 2009; Kusserow, 1999). Specifically, Americans are characterized by an unwillingness to “feel dependent on others” (Belk & Llamas 2012, p. 629). Future research could examine whether self-sufficiency is the process explanation that drives the effect of financial constraints on preferences for solitary purchases for independent consumers.

Another limitation of our study is the selective focus on the influence of perceived *financial* constraints on discretionary purchases. It is likely that if consumers are subjected to other forms of scarcity that affect life necessities such as food insecurity (during Covid-19), such scarcity may attenuate the influence of communal norms across cultures.

An interesting future research question would be to examine the influence of purchase choices under financial constraints on consumer well-being. Feelings of deprivation have been shown to have psychological consequences in terms of negative emotions of shame and stress (Chase & Walker, 2015). Such feelings will lower the desire of the individual to participate in social activities since social comparison will further exacerbate feelings of low self-esteem. Such social isolation will minimize consumer well-being (Wang et al., 2012). Our findings would predict that engaging in social purchases that are related to others may minimize social exclusion tendencies (likely to be activated under financial constraint) and lead to a greater sense of well-being.

Another interesting future direction could be a more nuanced theorizing of the antecedents and consequences of social purchases in particular. The higher utility associated with social (vs. solitary) purchases could be rooted in mere affect or the notion of reciprocity expectation. For instance, a social purchase may evoke positive affect merely when observing close others enjoying a product or experience (e.g., watching one's child ride a bike) with little or no expectations of reciprocity (i.e., mere affect). In contrast, a social purchase may indeed involve a reciprocity expectation that a product or experience purchased for the close other will be returned in some way, e.g., through an acknowledgment. Future research may explore whether the higher utility derived from social purchases may be driven by mere affect under financial abundance condition and reciprocity expectations under financial constrains condition.

Managerial implications

Our findings also highlight several strategies for managers to market their products effectively in the global marketplace. We advocate a nuanced context-specific approach to globalization that transcends the modal tendency to either standardize or regionalize marketing strategies. We suggest that managers should use different marketing strategies depending on whether the consumers are experiencing financial constraints or have abundant resources.

In terms of advertising, we first recommend the strategies that are relevant under financial constraints for independent consumers and then highlight the variations for interdependent consumers. For independent consumers, if the product is being marketed during times of financial scarcity, advertising that encourages consumption for personal reasons may be more persuasive since it will be consistent with the self-related goal of the consumers. In contrast, for interdependent consumers, the go-to advertising strategy is to highlight social situations that involve relevant others. This may be especially applicable for products that are amenable for both solitary and social consumption. For example, going to a movie, eating a meal in a restaurant, and going to a

museum, can be enjoyed alone or with significant others. As our Studies 2 and 4 indicate, managers could differentially frame these products to independent and interdependent consumers. In such situations, for independent consumers, it may be more beneficial to highlight the attributes that are relevant to the individuals under financial constraints. For instance, Starbucks' global ad campaign, which showed how its stores helped in facilitating human connections (Vranica, 2014), may be more effective for interdependent consumers. However, Starbucks may benefit by highlighting Starbucks' signature act of taking a consumer's name, writing it on a cup, and calling it out for independent consumers (Starbucks, 2020).

In terms of product offerings, during a financial downturn, it may be useful to offer line extensions that are scaled-down versions, such as mini sizes, that better meet the individual needs for independent consumers. In terms of sales promotions, direct price promotions such as price discounts and a coupon that makes the product less expensive may be more appealing than promotions that increase the quantity of purchase such as buy one and get one free or bulk discounts, since financial constraints reduce buying for others. In contrast, for interdependent consumers, it may be useful to offer sales promotions and product offerings that focus on shared purchases and family size quantities. Some brands have also modified their product strategies to be in tune with the self-construal of the target audience. For instance, Coca-Cola's initiative to personalize their product by printing the 250 most popular names in USA on their soft drink bottles (Tarver, 2019) promoted self-focus. This campaign was modified in India by printing the 20 most popular relationships, e.g., grandma, daddy, bro, etc. (Coca Cola, 2018) that is likely to highlight one's relationship with significant others. However, our findings would suggest that this strategy would be more meaningful under financial constraints. In other situations, Coca-Cola will benefit by promoting the same personalized product both in USA and India.

Our findings have implications for segmentation based on self-construal across countries. First, this research identifies target markets that are likely to be interdependent or independent that will be more receptive to solitary purchases (such as US and UK) or social purchases (such as India and Hong Kong). Second, companies can also benefit from self-construal segmentation within a country. For instance, the findings of Study 4 suggest that message and ad copy strategies can be used to prime self-construal.

Our findings are also relevant for the shared economy where consumers are "economically motivated" to share resources (Eckhardt et al., 2019). Our findings suggest that independent consumers may be motivated to share by highlighting the economic benefits to themselves. In contrast, highlighting the social benefits of the sharing economy may motivate interdependent consumers.

Given that social norms guide consumer behavior, incorporating social norms in marketing strategy will be beneficial especially in the global marketplace. Interestingly, for products that thrive on group consumption such as tourism, theme parks, and sports events, that may experience a downturn in sales due to financial constraints and the resultant selfish focus in the Western countries, we do recommend that companies highlight the relevance of communal norm and the benefits of sharing to stimulate social consumption. Marketers should ensure advertising appeals feature communal norms of sharing and make social norms salient while advertising for social purchases. In general, managers should be aware of the benefits of highlighting social norms across a range of consumer purchase scenarios and fine tune the marketing mix accordingly.

One of our key findings is that during times of abundance, consumer purchases are not necessarily aligned with their self-construal. Across self-construals, when resources are adequate, consumers engage in both solitary and social purchases. Thus, companies can use a standardized approach across self-construals, promoting either self-related or other related appeals depending on whether the product is a solitary or social purchase. Promoting social contexts for social purchases and individual contexts for solitary purchases will be effective since consumers have little need to prioritize and they purchase products that are needed for the situation. For example, companies targeting high-income customers around the world can use advertising strategies that are product relevant, without being concerned about the self-construal orientation of the consumer to the same extent as under financial constraints.

In sum, our findings based on evidence gathered from four countries, various purchase options, and self-construal manipulations and measurement, provide novel theoretical insights and illustrate a variety of business strategies that would help both academic scholars and managers to better understand financially constrained consumers and cultural differences in the global marketplace.

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