How Do Consumers' Cultural Backgrounds and Values Influence Their Coupon Proneness? A Multimethod Investigation

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Although coupons are very effective in increasing sales, a major challenge marketers face with coupons is the low redemption rates. Consequently, marketers are continuously trying to identify consumers who are more or less likely to respond to couponing efforts, in order to better direct coupons to segments high in coupon proneness and hence increase redemption rates. The current research identifies consumers' cultural backgrounds and values as important determinants of their likelihood of redeeming coupons. Across five studies, we find that Asians (vs. Caucasians), Indians (vs. Americans), and, more generally, consumers with an interdependent (vs. independent) self-construal are more likely to use coupons because they are more motivated to engage in self-regulation, which is proposed to enhance coupon proneness. We conclude with the implications of these findings for marketers, such as for their segmentation and targeting endeavors. We also provide specific tools that marketers could use, both inside and outside the store, to influence consumers' use of coupons.

Keywords: independence, interdependence, coupon proneness, self-regulation, price sensitivity, cultural self-construal

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A major challenge firms face with coupons is the low redemption rates. For example, $321 billion worth of coupons were issued by consumer package goods manufacturers in 2015, of which only 2.5% were redeemed (Inmar 2016). The low redemption rates create inefficiencies in marketing, as coupons are sent to a large segment with only a small fraction responding. Therefore, marketers are continuously trying to identify consumers who may be more or less likely to respond to couponing efforts, as this knowledge allows marketers to fine-tune the segments to whom coupons are directed (Argo and Main 2008; Garretson and Burton 2003).

An important, but surprisingly underexplored, factor that may influence coupon proneness—defined as the propensity to use coupons or to positively respond to a purchase offer because of a coupon (Lichtenstein, Netemeyer, and Burton 1990)—is the consumer's cultural background or values. Indeed, for some segments in the US, cultural reasons for using coupons overshadow economic and other factors (Donthu and Cherian 1992). In the current research, we attempt to address this gap by identifying an important

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cultural variable that predicts coupon proneness. The specific characteristic that is at the heart of our framework is cultural self-construal—the extent to which the self is seen as independent of or interdependent with others (Markus and Kitayama 1991).

We propose that consumers' degree of interdependence (but not independence) predicts coupon proneness. Although there can be several theoretical reasons for these relationships, we focus on one: self-regulation. Specifically, we suggest that consumers' degree of interdependence predicts their motivation to pursue self-regulation, which fosters the use of coupons. Previous research suggests that consumers high (vs. low) in interdependence (henceforth, "interdependents"), but not those high (vs. low) in independence (henceforth, "independents"), exercise more self-restraint to maintain harmony with others and to promote social cohesion (Heine et al. 1999; Rao 2015; Triandis 1995). These goals compel interdependents to be vigilant and cautious (Boon 2012; Lee, Aaker, and Gardner 2000) and to self-regulate their behavior, even in nonsocial domains (Seeley and Gardner 2003; Zhang and Shrum 2009). In the context of coupons, the greater tendency to engage in self-regulation translates to a greater motivation and willingness to persist with any or all of the steps involved in using coupons.

CULTURAL SELF-CONSTRUAL AND COUPON PRONENESS

People high in independence, such as those from North American and other Western societies, tend to value self-reliance, uniqueness, being distinct and separate from others, and seeking achievement and accomplishment. In contrast, people high in interdependence, such as those from South and East Asia (Korea, India, China, Japan), value benevolent relationships, maintaining and fostering in-group cohesion, harmony, camaraderie, and sociability (Shavitt et al. 2006a, 2006b; Triandis and Gelfand 1998).[1] Research also suggests that independent and interdependent tendencies can be fruitfully studied at the individual level (e.g., by assessing self-construal via scales) and can also be activated via priming procedures (Trafimow, Triandis, and Goto 1991). Next, we discuss how independence and interdependence lead to distinct self-regulatory tendencies, which directly influence coupon use.

1 Although early research (Hofstede 1980) viewed independence and interdependence as polar opposites, considerable recent research suggests that they are separate constructs that act differentially on numerous phenomena (Singelis 1994; Triandis and Gelfand 1998). Consistent with the latter view, as well as with the bulk of research in psychology and marketing (Escalas and Bettman 2005; Gabriel and Gardner 1999; Lee et al. 2000), we conceptualize independence and interdependence as distinct constructs that independently influence coupon proneness. Indeed, factor analyses across numerous other studies we have conducted suggest that the items for independence and interdependence load on distinct factors.

Cultural Self-Construal and Self-Regulation

Self-regulation is the systematic process of controlling, restraining, and adjusting one's actions and goals to achieve desired results (Jackson, MacKenzie, and Hobfoll 2000). It manifests in a better ability to persist in the face of obstacles, delay gratification, and accept short-term pain in exchange for long-term rewards (Fujita et al. 2006). In the context of coupons, the tendency to self-regulate translates to a greater willingness to persist with any or all of the steps involved in locating, clipping, collecting, organizing, saving, and using coupons, a feature we elaborate later.

Although exercising self-restraint is likely universally valued, the evidence suggests that interdependents (but not independents), due to their need to be socially accepted, are motivated to engage in self-regulation, which heightens the accessibility of self-regulatory strategies (for ease of exposition, we henceforth term these collective processes "self-regulation"). Indeed, interdependents (but not independents) value social cohesion and conformity to social norms and are sensitive to the needs of others. Therefore, they are more cautious and vigilant about their behavior. For example, they control their anger in public to meet social expectations (Markus and Kitayama 1991). Research confirms that self-regulation is "socially induced, shaped through societal forces, and is driven by our fundamental need to be socially accepted" (Seeley and Gardner 2003, 104).

In contrast, high (vs. low) independents do not feel as obligated toward others (Triandis 1995) and are not particularly concerned about social cohesiveness and conformity (Heine et al. 1999). Indeed, independence has been shown to not be (whereas interdependence has been shown to be) predictive of traits and values like relationship harmony (Kwan, Bond, and Singelis 1997), belongingness, camaraderie, and family safety (Gardner, Gabriel, and Lee 1999)—the drivers of self-regulation (Vohs, Baumeister, and Ciarocco 2005). Hence, we expected no relation between independence and self-regulation.

Although interdependence *and* independence are distinct variables, some previous research comparing interdependents *versus* independents also provides support for our theorizing. For example, consumers high in interdependence (vs. those high in independence) are less likely to succumb to behaviors associated with a lack of self-control, such as drinking beer and other alcohol (Zhang and Shrum 2009). They also display greater patience and are less likely to crave immediate consumption (Chen, Ng, and Rao 2005), and they are less likely to engage in impulsive buying behavior (Kacen and Lee 2002). Next, we examine how these differences may impact the tendency to use coupons.

Cultural Self-Construal, Self-Regulation, and Coupon Proneness

In the present investigation, we explore the possible interrelations among self-construal, self-regulation, and

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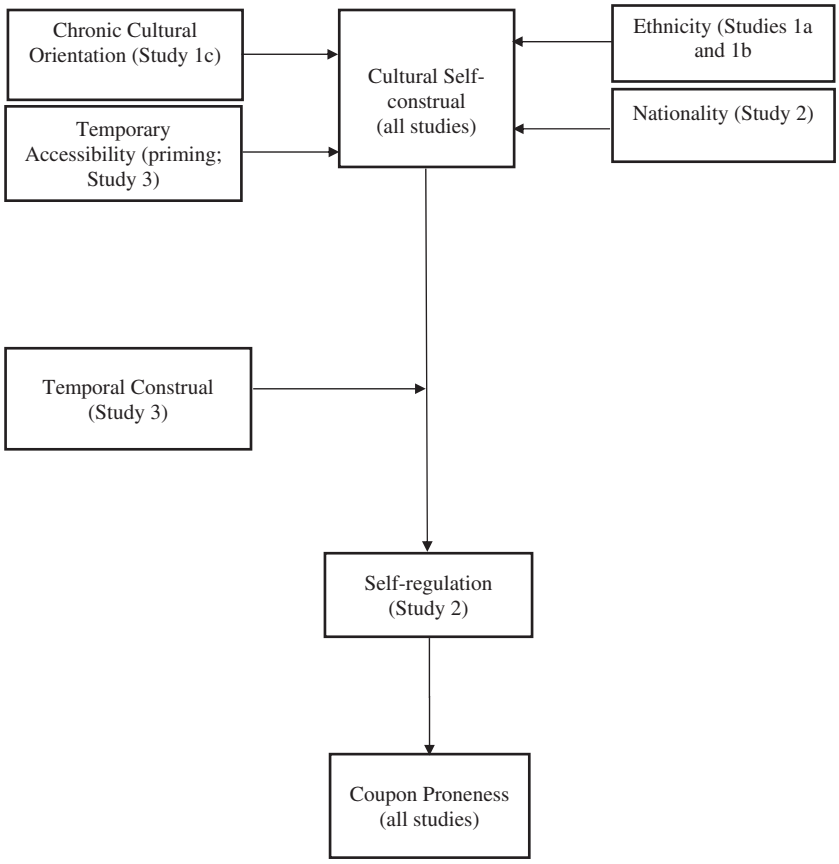
FIGURE 1

THE IMPACT OF CULTURAL SELF-CONSTRUAL ON COUPON PRONENESS



coupon proneness. Some coupon redemption may be random, mindless, or scripted, but considerable theoretical and empirical research suggests that such behavior is generally limited and accounts for minimal coupon redemption (Mittal 1994; NCH Marketing Services 2015; Su, Zheng, and Sun 2014). Instead, research suggests that most consumers who use coupons are utility maximizers who consciously choose to use coupons (Chandon 1995; Mittal 1994; Su et al. 2014; Venkatesan and Farris 2012).

We propose that consumers' degree of interdependence (but not independence) significantly predicts coupon proneness and that this relationship is mediated by self-regulation (see figure 1). The mediation hypothesis assumes that self-regulation positively affects coupon use. Although no known research has directly examined this predictive relation, there are theoretical reasons for expecting it. The use of coupons is a multistep process that requires effort and energy (Bagozzi, Baumgartner, and Yi 1992). A coupon user often needs to be on the lookout for coupons in newspapers, magazines, fliers, or the internet. The coupons then need to be carefully selected, clipped or printed, and saved in a readily accessible location. The use of coupons may also necessitate shopping at different stores. High self-regulators (i.e., those who can readily access self-regulatory strategies) may be more likely to persist with any or all of the cumbersome and effortful processes of locating, clipping, collecting, organizing, saving, and using coupons. The same is true for mobile coupons (Dickinger and Kleijnen 2008; Jayasingh and Eze 2012; Kleijnen, de Ruyter, and Wetzels 2007). Consumers need to save those on their smartphones/tablets and remember to present the coupon to the cashier when checking out (and before the coupons expire). With coupons used online, consumers often need to search for the right coupon (which, in our experience, can be quite effortful and time-consuming) and apply the coupon code in the appropriate box during

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checkout.[2] In contrast, low self-regulators may be deterred by the effortful process of using coupons and may be tempted to use their time on more pleasurable endeavors (Ainslie and Haslam 1992; Trope and Fishbach 2000; Wertenbroch 1998). Formally,

H1: Consumers' degree of interdependence, but not their degree of independence, positively predicts coupon proneness.

H2: The relationship between interdependence and coupon proneness is driven (i.e., mediated) by self-regulation.

Alternative Mechanisms

We also assessed several alternative explanations based on psychological, cultural, and demographic variables. First, interdependence (but not independence) has been associated with price sensitivity (Ackerman and Tellis 2001), which increases coupon proneness (Garretson and Burton 2003). Second, interdependence is correlated with power distance belief (Han, Lalwani, and Duhachek 2017; Lalwani and Forcum 2016), and we assessed if our effects are due to power distance belief. Third, interdependence (but not independence) increases impression management (Lalwani 2009), which may enhance the desire to be seen as a "smart shopper" and increase coupon use (Argo and Main 2008).[3] Fourth, perceiving structure increases people's motivation to engage in goal-directed action, and this effect is mediated by self-efficacy (Kay et al. 2014). If interdependents perceive more structure, they may be more likely to engage in goal-directed actions such as redeeming coupons.

OVERVIEW OF STUDIES

A multimethod approach was used to establish reliability and generalizability across five studies. Using seven different Nielsen scanner panel datasets, study 1a suggested that Asians (who are high in interdependence) are more likely to use coupons than Caucasians (who are low in interdependence). Study 1b replicated these findings in a field setting wherein participants redeemed a coupon in a Subway sandwich shop, and ruled out the role of price sensitivity. Study 1c suggested that interdependence, but not independence, positively predicts coupon proneness (hypothesis 1). Study 2 replicated these findings in a cross-national setting, and showed that Indians (vs. Americans) are more likely to redeem coupons. It also shed light on the mediating role of self-regulation (hypothesis 2). Study 3 explored a boundary condition based on Construal Level Theory (elaborated later).

STUDY 1A: EVIDENCE FROM SEVEN SCANNER PANEL DATASETS

Following Aaker and Williams (1998) and Escalas and Bettman (2005), as well as our pretest,[4] we used ethnicity to operationalize self-construal, and examined its effect on coupon proneness via seven different scanner panel datasets collected by A. C. Nielsen. Each dataset corresponded to a different year from 2004 to 2010, and included purchase information of 40,000–60,000 US households. The panelists used in-home scanners to record all their purchases—from any outlet—intended for personal, in-home use. Products included all Nielsen-tracked categories of food and nonfood items across all retail outlets in all US markets. Panelists were geographically dispersed and demographically balanced. For instance, in the dataset for the year 2010, the household income of 64.2% of panelists was less than $70,000 annually, 79.2% of the panelists had three or fewer members of the household, 76% owned a single-family house or a condo, and 72.6% did not have children under 18.

The datasets included detailed transaction information for each product purchased, including the total discount amount due to coupon use if the panelist used a coupon, and demographic information of panelists, including their ethnicity, household income, household size, type of residence, household composition, age and presence of children, female head age, male head age, female head employment situation, male head employment situation, male head education, female head education, male head occupation, and female head occupation (see web appendix A for details). Of note, panelists' ethnicity was measured via a closed-ended question with four options (1 = White/Caucasian; 2 = Black/African American; 3 = Asian; 4 = Other). In the seven yearly datasets for the period 2004–2010, 84% to 86.4% of the panelists were Caucasian, 7.5% to 8.4% were Black/African American, 1.7% to 2.2% were Asian, and 4.1% to 5.1% were of other ethnicities.

2 Not surprisingly, across numerous datasets and different measures, we found that mobile coupon use requires self-regulation. A pretest we conducted ($N = 46$) confirmed that consumers perceive mobile coupons to require effort to search, browse, select, and redeem ($M = 4.65$, $t(45) = 3.05$, $p < .005$), that mobile coupons can be difficult to find ($M = 4.80$, $t(45) = 3.12$, $p < .005$), and that searching for mobile coupons can take time ($M = 4.89$, $t(45) = 3.89$, $p < .001$).

3 It is noteworthy that some previous research suggests that coupon users may be seen as cheapskates who use coupons to save money. However, this account predicts that interdependents (vs. independents) may be less coupon prone because they have a greater tendency to engage in impression management (Lalwani 2009; Lalwani et al. 2006, 2009; Lalwani and Shavitt 2009). We did not find support for this hypothesis in any of our datasets.

4 In a pretest ($N = 339$), Caucasians (vs. Asians) scored significantly higher on the independence scale ($M_{Caucasians} = 5.27$, $M_{Asians} = 5.04$, $t(337) = 2.35$, $p < .05$) but lower on the interdependence scale ($M_{Caucasians} = 5.29$, $M_{Asians} = 5.53$, $t(337) = -2.80$, $p = .005$) (Triandis and Gelfand 1998). These scales are the most commonly used in the literature to measure self-construal (Cross, Hardin, and Gercek-Swing 2011).

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TABLE 1

ETHNIC GROUP DIFFERENCES IN COUPON USE IN NIELSEN SCANNER PANEL DATASETS (STUDY 1A)

Results with demographic control variables (covariates) included**

		Coupon use (Dummy-coded: 0 = coupon not used, 1 = coupon used) Logistic regression results		**Discount amount due to the coupon** Linear regression results		**Percent of savings due to the coupon** Linear regression results	
Dataset	Year	β estimate	Wald statistic*	β estimate	*t* statistic*	β estimate	*t* statistic*
1	2004	.24	3,025.25	.04	64.28	.01	69.59
2	2005	.25	3,197.50	.04	69.40	.01	70.53
3	2006	.24	2,935.16	.04	68.47	.01	61.01
4	2007	.19	3,095.40	.03	48.17	.01	45.83
5	2008	.13	1,466.67	.03	42.92	.004	33.87
6	2009	.13	1,918.64	.04	54.87	.01	43.42
7	2010	.18	4,510.91	.05	71.86	.01	66.68

Results with demographic control variables (covariates) excluded

		Coupon use		**Discount amount due to the coupon**		**Percent of savings due to the coupon**	
Dataset	Year	β estimate	Wald statistic*	β estimate	*t* statistic*	β estimate	*t* statistic*
1	2004	.24	2,991.14	.04	64.80	.01	67.24
2	2005	.25	3,171.71	.04	68.92	.01	67.40
3	2006	.25	3,321.23	.05	71.84	.01	61.64
4	2007	.22	4,204.54	.04	56.77	.01	51.74
5	2008	.18	2,888.17	.04	55.76	.01	45.16
6	2009	.20	4,679.59	.05	72.84	.01	62.81
7	2010	.28	10,616.75	.07	99.24	.01	99.49

NOTES.—The independent variable "ethnicity" was dummy-coded: 0 = Caucasian, 1 = Asian.

*All statistics are significant at $p < .001$.

**The demographic control variables (covariates) were: household income, household size, type of residence, household composition, age and presence of children, female head age, male head age, female head employment situation, male head employment situation, male head education, female head education, male head occupation, and female head occupation.

Results and Discussion

We analyzed all seven datasets separately using three different dependent variables focusing on whether Caucasians and Asians differed 1) in their coupon use, 2) in the dollar amount they saved by using coupons, and 3) in the percentage of the total price they saved by using coupons. For the first analysis, we created a dummy variable indicating whether or not a coupon was used for each product purchased (dummy-coded: 0 = coupon not used, 1 = coupon used). Next, we conducted logistic regressions with coupon used (or not) as the dependent variable, and ethnicity (dummy-coded: 0 = Caucasian, 1 = Asian) and all the other demographic control variables noted above as independent variables. The results of these analyses are shown in table 1. In every dataset examined, after controlling for all the other demographic variables, we found that Asians (vs. Caucasians) were significantly more likely to use coupons. For the second analysis, we estimated regression equations with the total discount amount (in dollars) associated with the coupon as the dependent variable and respondents' ethnicity and all the other demographic control variables as independent variables. In every dataset, the effect of ethnicity on the discount amount was significant and positive, suggesting that Asians also saved a higher dollar amount with coupons than did Caucasians (see table 1). For the third analysis, we estimated regression equations with the percent of savings due to the coupon (DV = coupon value × 100/price paid for the product) as the dependent variable, respondents' ethnicity, and all the other demographic control variables as independent variables. In every dataset, Asians saved a greater percentage of the total price using coupons than did Caucasians.

Using seven different scanner panel datasets, study 1a provided initial support for hypothesis 1 by showing that Asians (vs. Caucasians) are more likely to a) use coupons, b) save money (in dollars) due to coupons, and c) save money (in percent) due to coupons after we controlled for numerous demographic variables, including household income, household size, type of residence, and

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age.[5] In study 1B, we examined the relationships via a field experiment.

STUDY 1B: THE SUBWAY STUDY

In study 1b, we examined the relationship between ethnicity and coupon proneness via a field study in which participants were given a real coupon to redeem at a local restaurant. We also controlled for price sensitivity and several demographic variables.

Method

Participants. Five hundred five people participated in the study through several different avenues: 206 (40.8%) undergraduate students participated in our behavioral lab, 99 (19.6%) people participated through booths that we set up either on school premises or on streets, and 200 (39.6%) students participated through an online link we sent them via email. Participants who either did not complete the survey in its entirety ($N = 25$) or were not Asian or Caucasian ($N = 58$) were excluded, resulting in 422 participants being retained (216 females, $M_{age} = 23$). Excluded participants did not differ significantly from included ones on any demographic variables.

Procedure. All participants were invited to participate in a brief survey in exchange for a $4.00 coupon redeemable at a local Subway restaurant. For a set period of time, a Subway restaurant close to our university campus agreed to honor the coupons we issued, provided that the store was reimbursed for the cost. Respondents who participated in the study online received the coupon in soft copy, which they could print, whereas all others received the coupon in hard copy at the end of the survey booklet. Each coupon was assigned a unique ID number that allowed us to link the coupon back to the participant's responses upon its redemption. We collected the redeemed coupons from the store after all the coupons distributed had expired. One hundred fifty-four people redeemed the coupon, which constitutes a 32% redemption rate.

Measures. We operationalized self-construal via a managerially actionable variable, namely ethnicity, which was measured via a close-ended question with six options (1 = African American or Black, but not of Hispanic origin, 2 = White, but not of Hispanic origin, 3 = Hispanic or Latino, 4 = Asian, 5 = Native American or Aleut, 6 = some other group). Participants who indicated being White, but not of Hispanic origin, represented independents ($N = 245$), whereas those who indicated being Asian represented interdependents ($N = 177$), as in study 1a. We also assessed price sensitivity ($\alpha = .78$) using a five-item, seven-point scale (1 = strongly disagree, 7 = strongly agree) developed and validated by Lichtenstein et al. (1993). A sample item was "I will grocery shop at more than one store to take advantage of low prices." Participants also reported their gender, education, income, and household size (see web appendix A).

Results and Discussion

A logistic regression with coupon redemption (dummy-coded: 0 = No, 1 = Yes) entered as the dependent variable and ethnicity (dummy-coded: 0 = Caucasian, 1 = Asian), gender (dummy-coded: 0 = male, 1 = female), income, education, household size, and price sensitivity entered as independent variables revealed significant effects of ethnicity ($\beta(1) = .50$, $\text{Exp}(\beta) = 1.70$, $\text{Wald} = 5.22$, $p < .03$), gender ($\beta(1) = -.89$, $\text{Exp}(\beta) = .42$, $\text{Wald} = 14.80$, $p < .001$) and household size ($\beta(1) = -.34$, $\text{Exp}(\beta) = .71$, $\text{Wald} = 7.74$, $p < .006$). The positive beta coefficient for ethnicity suggested that Asians were more likely to redeem coupons than Caucasians. The negative beta coefficients for gender and household size suggested that males (vs. females) and participants from small (vs. large) households were more likely to redeem coupons. The effects of education, income, and price sensitivity were nonsignificant (*p*s ranged from .18 to .76). A chi-square analysis confirmed that Asians ($N_{actual} = 67$, $N_{expected} = 56.6$), compared to Caucasians ($N_{actual} = 68$, $N_{expected} = 78.4$), were more likely to redeem coupons ($\chi^2(1) = 4.82$, $p < .04$).

Using a field setting, study 1b further supported our hypothesis that Asians are more coupon prone than Caucasians, after we controlled for price sensitivity and demographic variables including gender, education, income, and household size. However, because ethnicities differ on several dimensions (e.g., power distance belief, masculinity-femininity, uncertainty avoidance), we deemed it important to ascertain the relationship between cultural self-construal and coupon proneness using individual differences in self-construal. We accomplish that in the next study.

STUDY 1C: THE ROLE OF CULTURAL SELF-CONSTRUAL

Method

One hundred forty-three respondents (84 females, $M_{age} = 36$) from Amazon Mechanical Turk (MTurk) participated in the study for a small monetary reward. We assessed coupon proneness first, using a five-item scale validated by Lichtenstein et al. (1993). A sample item

5 One limitation of study 1a is that Asians (~ 2.2%) were significantly fewer in number than Caucasians (~ 86.4%). However, their sample size was substantial in absolute terms ($N_{Asians} \sim 680{,}400$). Moreover, given the converging evidence from the other studies, we have no reason to believe that sample size played a role in these results. If anything, the disparate sample sizes likely enabled a conservative test of our hypotheses.

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($\alpha = .79$) included, "I enjoy using coupons regardless of the amount I save by doing so" (see web appendix A).

We measured self-construal next, using a 16-item scale validated by Triandis and Gelfand (1998). A sample item to measure independence (eight items; $\alpha = .63$) is "I'd rather depend on myself than others." A sample item to measure interdependence (eight items; $\alpha = .73$) is "If a coworker gets a prize, I would feel proud." All scales were assessed on seven points (1 = "strongly disagree" and 7 = "strongly agree"). Participants also reported their gender, income, education, type of residence (rent vs. own), household size, and number of children in the household.

Results and Discussion

We predicted that interdependence, but not independence, would be associated with coupon proneness (hypothesis 1). The data supported this hypothesis. A regression equation with coupon proneness entered as the dependent variable and independence, interdependence, and all the demographic variables described above entered as independent variables revealed that interdependence significantly predicted coupon proneness ($\beta = .21$, $t(133) = 2.43$, $p < .02$), whereas independence did not ($\beta = .03$, $t(133) = .33$, $p > .73$). The effect of gender was significant ($\beta = .29$, $t(133) = 3.62$, $p < .001$), whereas all other covariates were not significant (ps ranged from .11 to .54). The same pattern was observed when only interdependence and independence were entered as independent variables (interdependence: $\beta = .31$, $t(140) = 3.58$, $p < .001$; independence: $\beta = -.04$, $t(140) = -.40$, $p > .68$) (see web appendix B).[6] The VIF values for both interdependence and independence were 1.025, which indicated that multicollinearity was not an issue in the data.

Study 1c revealed that interdependence, but not independence, is associated with a greater tendency to use coupons (hypothesis 1). In the next study, we tested the mediating role of self-regulation and ascertained the generalizability of our findings by using different operationalizations of self-construal and coupon proneness.

STUDY 2: CROSS-NATIONAL DIFFERENCES AND THE MEDIATING ROLE OF SELF-REGULATION

The goals of study 2 were fourfold. First, we explored the mechanism underlying the link between cultural self-construal and coupon proneness. If consumers high (vs. low) in interdependence are more coupon prone because of differences in self-regulation, then self-regulation should mediate the link between self-construal and coupon proneness (hypothesis 2). Second, we examined cross-national differences in coupon proneness. Third, we assessed the generalizability of the effect of self-construal on coupon proneness using different operationalizations of both variables. Fourth, we examined if our effects may be artifacts of power distance belief, impression management, or price sensitivity.

Method

Participants. Nationality was used to operationalize self-construal. Indian respondents from India ($N = 151$) were chosen to represent the high-interdependence group and American respondents from the United States ($N = 153$) were chosen to represent the low-interdependence group. These countries were chosen because research suggests that Indians are more interdependent and less independent than Americans (Hofstede 1980; Lalwani and Shavitt 2013; Monga and John 2007). Both samples were recruited via MTurk (150 females, $M_{age} = 35$) and paid $.50 to participate. All Indian respondents were proficient in English, so the questionnaire was administered in English.

Coupon Proneness. We assessed coupon proneness by measuring participants' ostensibly real purchasing behavior from a fictitious website. At the beginning of the survey, all participants were informed that "an online retailing company is launching a website 'e-Entertainer.com' to sell and lease movies, songs, albums, etc., and we have been asked to conduct a survey to test the usability of the website." They were then shown a screenshot of the website (see web appendix C). Next, they were asked to list a movie title that they may be interested in renting from the website. On the following page, they were informed that the movie title they wrote was available to rent for $1.99. More importantly, they were offered a coupon worth $1.49 that could be applied toward the movie rental. Participants were also given the option to use the money they would have earned by completing the survey ($.50) to rent the movie. With the $1.49 off coupon and the $.50, they could download the movie at the end of the survey without paying anything. They were told that by selecting "yes," they would be able to download the movie at the end of the survey and they would not be paid for completing the survey; by selecting "no," they would forego the opportunity to rent the movie with the coupon and would be paid $.50 for completing the survey.

At the end of the survey, participants responded to a two-item, seven-point scale (1 = not at all, 7 = completely; $r = .74$, $p < .001$) that measured the believability of the promotion. A sample item was "How believable was e-Entertainer.com's promotional campaign that you read

6 In all studies in which we assessed independence and interdependence via continuous measures, we first conducted the analyses by including the interaction term of independence and interdependence. We found that the interaction term was nonsignificant in all such studies. Hence, we dropped the interaction term and conducted the analyses again, and found that the results did not change.

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earlier in the survey?" A one sample *t*-test suggested that participants believed that the promotion offered was real ($M_{\text{mid-point}} = 4$, $M_{\text{response}} = 4.41$, $t(306) = 5.13$, $p < .001$). All participants were also debriefed on the fictitious nature of the website.

Self-Regulation and Other Measures. Following Baumeister et al. (2006), we assessed self-regulation via an anagram task that required participants to rearrange all the letters in a given word to create a new word (e.g., *Elvis* can be rearranged to *Lives*). Participants were presented with eight words that varied in difficulty level, and were instructed to "try your best to solve the puzzles and only move on when you feel that you have done everything you can." Their performance on the anagram task (i.e., number of correct responses) was used as a measure of self-regulation (Baumeister et al. 2006). We assessed power distance belief using an eight-item, nine-point scale (1 = strongly disagree, 9 = strongly agree) developed by Hofstede (2001; also see Zhang, Winterich, and Mittal 2010). A sample item ($\alpha = .61$) included, "Employees should respect their supervisors highly." We measured impression management using the 18-item, nine-point self-monitoring scale ($\alpha = .64$; Snyder and Gangestad 1986). A sample item included, "In different situations and with different people, I often act like very different persons." Participants also responded to the price sensitivity scale ($\alpha = .82$) as in study 1b (see web appendix D for the correlations among the variables) and demographics as in study 1c (see web appendix A).

Results and Discussion

Effect of Nationality on Coupon Proneness. We expected Indians to be more coupon prone than Americans, independent of power distance belief, impression management, price sensitivity, and demographic variables. The data supported this expectation. A logistic regression with coupon proneness as the dependent measure (dummy-coded: 0 = No, 1 = Yes) and nationality (dummy-coded: 0 = American, 1 = Indian), gender (dummy-coded: 0 = Male, 1 = Female), power distance belief, impression management, price sensitivity, and all the other demographic variables as independent variables revealed a significant effect of nationality ($\beta(1) = .89$, $\text{Exp}(\beta) = 2.43$, $\text{Wald} = 5.38$, $p < .03$) and impression management ($\beta(1) = .28$, $\text{Exp}(\beta) = 1.33$, $\text{Wald} = 4.35$, $p < .04$), and a marginally significant effect of power distance belief ($\beta(1) = .27$, $\text{Exp}(\beta) = 1.32$, $\text{Wald} = 3.22$, $p < .08$). The positive beta coefficients indicated that Indians (vs. Americans) and those with high (vs. low) impression management tendency were significantly more coupon prone, whereas those with high (vs. low) power distance belief were marginally more coupon prone. All other effects were not significant ($ps > .12$).

Mediation Analysis. Next, we tested the mediating role of self-regulation, impression management, power distance belief, and price sensitivity. In PROCESS model 6, we entered coupon proneness as the dependent measure, nationality as the independent variable, and self-regulation, impression management, power distance belief, and price sensitivity as mediators, and conducted 10,000 iterations. Self-regulation emerged as a significant mediator (.47; the 95% confidence interval excluded zero [.09 to .90]), but the effects of impression management, power distance belief, and price sensitivity were not significant (the 95% confidence interval for all three variables included zero [–.17 to .47]).[7] Another mediation analysis revealed that power distance belief did not mediate the effect of nationality on coupon proneness ($\beta = .15$, $\text{SE} = .13$, $\text{CI}_{95} = -.08, .41$). The following serial mediation was also not supported: nationality→power distance belief→Self-regulation→Coupon proneness ($\beta = .03$, $\text{SE} = .05$, $\text{CI}_{95} = -.06, .12$).

Study 2 shed light on the mechanism underlying the link between self-construal and coupon proneness by showing that it was mediated by self-regulatory tendencies (hypothesis 2), but not by impression management, power distance belief, or price sensitivity. Moreover, we operationalized self-construal using nationality, which demonstrated that our findings are robust across nations. Finally, we used a behavioral dependent variable to ascertain the generalizability of our findings.

THE ROLE OF TEMPORAL CONSTRUAL

Construal Level Theory (Trope and Liberman 2010; Trope, Liberman, and Wakslak 2007) suggests that consumers mentally represent behavior at multiple levels. Because under a high (vs. low) temporal construal, consumers focus on their primary, central objectives (vs. secondary, incidental ones), they tend to have more accessible self-regulatory thoughts and are more motivated to exert self-control (Fujita et al. 2006). Accordingly, Fujita et al.'s (2006) studies revealed that, when temporal construal is high, consumers display a lower preference for immediate gratification, persist with tasks requiring self-regulation (e.g., pressing a handgrip) for a longer duration, and view temptations more negatively. However, when temporal construal is low, consumers tend to be myopic and are driven by low-level concerns (e.g., immediate gratification,

7 A logistic regression with Indians versus Caucasian Americans only suggested that Indians were more coupon prone than Caucasian Americans ($\beta(1) = 1.10$, $\text{Exp}(\beta) = 3.01$, $\text{Wald} = 6.60$, $p < .02$), and this effect was mediated by self-regulation (mean indirect effect of self-construal on coupon proneness through self-regulation was positive [.84] and the 95% confidence interval excluded zero [.20 to 1.50], but not by impression management, power distance, or price sensitivity [the 95% confidence interval for all three variables included zero, –.05 to .54]).

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impulsivity). Thus, we predicted that if managers focus consumers' attention on the distant future (i.e., high temporal construal), the self-regulatory tendencies of consumers whose baseline level of self-regulation is low (i.e., independents) should increase because there is greater scope for elevating the self-regulatory tendencies of such consumers. However, because the self-regulatory tendencies of interdependents are already high, there is little scope of elevating them further (akin to a ceiling effect). Hence, focusing consumers' attention on the distant future should increase the self-regulatory tendencies (and hence, coupon proneness) of independents, but not interdependents, from their respective baselines in a control condition.

Following the same logic, focusing consumers' attention on the near future (i.e., low temporal construal) should reduce the self-regulatory tendencies (and hence, coupon proneness) of people whose baseline self-regulatory tendencies are high (i.e., interdependents) but should have no effect on people whose baseline self-regulatory tendencies are low (i.e., independents). However, when consumers' focus of attention is not altered (i.e., in a control condition), we expected interdependents (vs. independents) to be more coupon prone, due to their higher baseline level of self-regulation. It is noteworthy that manipulating temporal construal (and hence, accessibility of self-regulatory strategies) allows us to rule out the notion that the relation between self-construal and coupon proneness may be spurious.

> **H3a:** When temporal construal is manipulated to be high, the coupon proneness of independents is enhanced, whereas that of interdependents is unchanged, compared to those in a control condition.
>
> **H3b:** When temporal construal is manipulated to be low, the coupon proneness of interdependents is reduced, whereas that of independents is unchanged, compared to those in a control condition.

STUDY 3: THE ROLE OF TEMPORAL CONSTRUAL

Study 3 was designed to explore the moderating role of temporal construal in the relationship between cultural self-construal and coupon proneness (hypotheses 3a and 3b) and to rule out the role of impression management, self-efficacy, need for structure, and price sensitivity.

Method

Participants. Four hundred three adults (242 females, $M_{age} = 33$ years) from MTurk participated for a small monetary remuneration.

Temporal Construal Manipulation. Following Agrawal and Wan (2009), we manipulated temporal construal by having participants work on a mindset task that required them to think in the near future (low-level temporal construal; $N = 127$) or in the distant future (high-level construal; $N = 123$) or with no reference to time (control condition; $N = 153$). All participants described five activities in writing (e.g., having a party at their place). In the low- (high-) temporal-construal condition, they imagined that the activities would be held the next day (next year). In the control condition, there was no reference to the time when the activities would take place. The manipulation was validated via a pretest ($N = 80$) in which participants were exposed to the manipulation noted above followed by a two-item scale adapted from the BIF to measure participants' temporal construal (Vallacher and Wegner 1989). Following Galinsky, Gruenfeld, and Magee (2003), we restricted the manipulation check to participants in the high- and low-temporal-construal conditions because in the control condition, there was no reference to the time when the activities would take place. Results revealed that participants in the high- (vs. low-) temporal-construal condition scored significantly higher on temporal construal ($M_{low\ level} = 1.61$, $M_{high\ level} = 1.81$, $t(78) = -2.41$, $p < .02$), which validated the manipulation.

Self-Construal Prime and Coupon Proneness Measure. Following Monga and John (2007), we operationalized self-construal via a pronoun counting task. In the interdependent condition, the pronouns were *we*, *us*, and *our*, which made the connection between a participant and others salient. In the independent condition, the pronouns were *I*, *me*, and *mine*, which drew participants' attention to themselves (the prime was dummy-coded: 0 = independent, 1 = interdependent). A pretest ($n = 219$) revealed that participants in the independent (vs. interdependent) prime condition scored significantly higher on the independence scale ($M_{independent} = 5.34$, $M_{interdependent} = 5.09$; $t(217) = 2.20$, $p < .05$), and significantly lower on the interdependence scale ($M_{independent} = 5.45$, $M_{interdependent} = 5.63$; $t(217) = 1.96$, $p = .05$) developed by Triandis and Gelfand (1998). Although the mean differences are miniscule, the effect sizes fall between small to medium (rs = .13 and .15). We assessed coupon proneness using the following scenario:

> You are offered a coupon from a restaurant chain, which offers you a 25% discount on every meal you have at that chain for a month. Please indicate the likelihood that you will eat only at that chain throughout the month just to redeem that offer even though you have other options. [dummy-coded: 0 = no, 1 = yes]

Control Variables. We measured impression management using the 20-item Balanced Inventory of Desirable Responding (Paulhus 1991) (sample item: "I always obey laws, even if I'm unlikely to get caught"; $\alpha = .78$). We measured self-efficacy using Chen, Gully, and Eden's

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(2001) eight-item scale (sample item: "I will be able to achieve most of the goals that I have set for myself"; $\alpha = .94$). We measured need for structure using Thompson et al.'s (2001) 12-item scale (sample item: "I enjoy having a clear and structured mode of life"; $\alpha = .87$). All three measures were assessed on seven-point scales (1 = strongly disagree, 7 = strongly agree). Price sensitivity ($\alpha = .84$) was assessed as in studies 1b and 2.

Results and Discussion

First, a chi-square test suggested that the main effect of temporal construal was significant ($\chi^2(1) = 7.18$, $p < .03$); participants in the low-temporal-construal condition (40%) were less coupon prone than those in the control condition (46%), who in turn were less coupon prone than those in the high-temporal-construal condition (57%). Next, we predicted that a high temporal construal would enhance independents', but not interdependents', coupon proneness (compared to in the control condition), whereas a low temporal construal would reduce interdependents' (but not independents') coupon proneness (again, compared to the control condition). The data supported these expectations.

We conducted a logistic regression analysis with coupon proneness as the dependent measure; self-construal prime, two dummy-coded variables for the temporal construal manipulation, and their interactions as independent variables; and impression management, price sensitivity, need for structure, self-efficacy, and demographic control variables as covariates. The results revealed significant main effects of self-construal prime ($\beta(1) = 1.03$, $\text{Exp}(\beta) = 2.79$, $\text{Wald} = 8.72$, $p < .004$) and one of the two dummy variables (control vs. high temporal construal [D2]) for the temporal construal manipulation ($\text{Wald} = 8.49$, $p < .005$), but not of the other dummy-coded variable (control vs. low temporal construal [D1]) for the temporal construal manipulation ($\text{Wald} = 1.06$, $p > .30$). More importantly, the results also revealed significant two-way interactions between the cultural self-construal prime and both the dummy-coded variables for the temporal construal manipulation ([D1] × cultural self-construal prime: $\beta(1) = -1.33$, $\text{Exp}(\beta) = .27$, $\text{Wald} = 6.54$, $p < .02$; [D2] × cultural self-construal prime: $\beta(1) = -1.32$, $\text{Exp}(\beta) = .27$, $\text{Wald} = 6.57$, $p < .02$). Hence, the relationship between self-construal and coupon proneness varied significantly by temporal construal condition. The effects of price sensitivity ($\beta(1) = .25$, $\text{Exp}(\beta) = 1.29$, $\text{Wald} = 7.70$, $p < .007$), self-efficacy ($\beta(1) = -.22$, $\text{Exp}(\beta) = .81$, $\text{Wald} = 3.27$, $p < .08$), education ($\beta(1) = -.15$, $\text{Exp}(\beta) = .86$, $\text{Wald} = 3.40$, $p = .07$), and the size of residence ($\beta(1) = .20$, $\text{Exp}(\beta) = 1.22$, $\text{Wald} = 2.84$, $p = .09$) were significant or marginally so. All other variables, including need for structure and impression management, were not significant (ps > .45).

In the control condition, as predicted, cultural self-construal (dummy-coded: 0 = Independent, 1 = Interdependent) significantly predicted coupon proneness ($\beta(1) = 1.08$, $\text{Exp}(\beta) = 2.94$, $\text{Wald} = 8.31$, $p < .005$). Price sensitivity was marginally significant ($p = .09$), and all other control variables were not significant (ps ranged from .11 to .87). The positive beta for cultural self-construal suggested that interdependents (vs. independents) were more coupon prone. In the low-temporal-construal condition, as predicted, interdependents' coupon proneness decreased ($N_{\text{actual}} = 21$, $N_{\text{expected}} = 26.8$), compared to that in the control condition ($N_{\text{actual}} = 43$, $N_{\text{expected}} = 37.2$) ($\chi^2(1) = 4.27$, $p = .05$), but that of independents was unchanged ($N_{\text{actual}} = 30$, $N_{\text{expected}} = 28$), compared to that in the control condition ($N_{\text{actual}} = 28$, $N_{\text{expected}} = 30$) ($\chi^2(1) = .43$, $p = .62$). However, in the high-temporal-construal condition, independents' coupon proneness increased ($N_{\text{actual}} = 36$, $N_{\text{expected}} = 27.6$), compared to that in the control condition ($N_{\text{actual}} = 28$, $N_{\text{expected}} = 36.4$) ($\chi^2(1) = 8.51$, $p < .006$), but that of interdependents was unchanged ($N_{\text{actual}} = 34$, $N_{\text{expected}} = 35.5$), compared to that in the control condition ($N_{\text{actual}} = 43$, $N_{\text{expected}} = 41.5$) ($\chi^2(1) = .25$, $p > .73$). These findings support hypotheses 3a and 3b (see figure 2). We also analyzed the effects without the covariates, and found that both two-way interactions remained significant (interaction 1: $\text{Wald} = 3.82$, $p = .05$; interaction 2: $\text{Wald} = 5.88$, $p < .02$; see web appendix B).

Discussion

Study 3 explored the moderating role of temporal construal and suggested that a high temporal construal (relative to a baseline control condition) enhances the coupon proneness of independents, but not interdependents. However, a low temporal construal (relative to baseline conditions) reduces the coupon proneness of interdependents, but not independents. Further, self-construal influences coupon proneness in a control condition wherein temporal construal is not changed, but not when it is high or low. The study also revealed that our effects are not due to impression management, price sensitivity, need for structure, self-efficacy, or demographics.

Some recent research suggests that interdependents (vs. independents) perceive future events as more proximal (Lee, Lee, and Kern 2011). If so, our high-temporal-construal manipulation could have acted like the low-temporal-construal condition and interdependents should not have differed in their coupon proneness in these conditions. However, the significant main effect of temporal construal suggested that this was not the case. Moreover, interdependents in the high (vs. low) temporal condition were significantly more coupon prone ($\chi^2(1) = 4.27$, $p = .05$).

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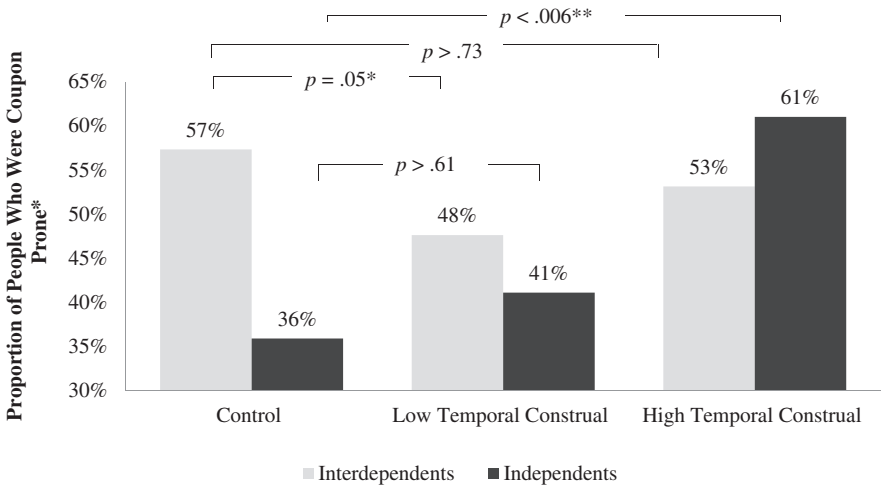
FIGURE 2

THE MODERATING ROLE OF TEMPORAL CONSTRUAL IN THE RELATIONSHIP BETWEEN SELF-CONSTRUAL AND COUPON PRONENESS (STUDY 3)



*Proportion of people who were coupon prone = the number of people who responded yes to the coupon prone question / (the number of people who responseded yes to the coupon prone question + the number of people who responded no to the coupon prone question).

GENERAL DISCUSSION

Collectively, the five studies provide converging and robust evidence for the role of self-construal in coupon proneness using a variety of measures and manipulations of the key variables. Studies 1a and 1b revealed that Asians (who tend to be high in interdependence) are more coupon prone than Caucasians (who tend to be low in interdependence) via secondary datasets and a field study. Study 1c showed that interdependence, but not independence, is associated with coupon proneness. Study 2 replicated these findings using a cross-national dataset, and shed light on the mediating role of self-regulation. Study 3 showed that a focus on the distant future increases independents', but not interdependents', coupon proneness, whereas a focus on the near future reduces interdependents', but not independents', coupon proneness.

Managerial Implications

Managers who rely on coupons to boost sales may find greater success with segments characterized by high interdependence (e.g., various Asian—including Chinese, Indian, and Korean—neighborhoods). Stores catering to an Asian clientele (e.g., Korean, Chinese grocery stores) may find greater success with coupons than those catering to a Caucasian clientele. Moreover, marketers with nationwide operations who use coupons would be advised to first target states with high collectivism scores (see Vandello and Cohen [1999] for the scores of all 50 US states). Second, marketers could activate self-construal via ads or POP material by using priming procedures, and hence influence coupon redemptions using contextual cues. For example, ads could invite consumers to think about themselves versus their family and friends (Trafimow et al. 1991), and slogans could state, "Remember, enjoying your life is what it is really all about" or "Remember, relationships are what life is really all about" (Hamilton and Biehal 2005; to activate the independent or interdependent self-construal, respectively). Inside the store, marketers could display videos depicting a person enjoying activities alone or in a group. Third, marketers attempting to increase the use of coupons should not bombard consumers with too much information or tax their self-regulatory resources, as these can be depleting and reduce coupon usage. Fourth, among independent consumers (e.g., in Caucasian neighborhoods, stores, or states), coupons that are redeemable in the future (e.g., on an upcoming holiday) are likely to be more successful, compared to those available immediately (i.e., baseline conditions; Martin, Gnoth, and Strong 2009). Fifth, managers of virtue (but not vice) products may be particularly successful with a couponing strategy with interdependents (vs. independents; see study 5 in web appendix G).

Implications for Public Policy

This article also has some implications for consumer well-being and public policy. Economists, social workers,

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and politicians have lamented the low savings rate in the United States and other Western countries (Yoon 2017). One way to increase the savings rate is to encourage the use of coupons. For example, in 2014, US consumers saved $3.6 billion by redeeming coupons (NCH Marketing Services 2015). A *Wall Street Journal* article reported on a consumer who turned to couponing for savings and saved more than $1,000 on a midnight shopping trip to two supermarkets (Martin 2010). Therefore, encouraging consumers to be more coupon prone can improve their financial health. Promoting consumers' financial health has implications for consumers, governments, policy makers, banks, and financial advisers.

Anticipated Boundary Conditions

Results from a study not reported in the current article showed that managers can increase independents' motivation to self-regulate their behavior (and hence, coupon proneness) by highlighting that self-regulation facilitates individual goals (e.g., self-esteem) more than group goals (e.g., camaraderie and kinship). Because interdependents value different goals, such a strategy demotivates them from engaging in self-regulation and using coupons. Moreover, although our findings suggest that impression management does not mediate the link between self-construal and coupon proneness, its effect may emerge if social identity concerns are heightened. Furthermore, although some research suggests that coupon-prone consumers are perceived as smart shoppers (Argo and Main 2008), they may also be perceived as cheapskates. When this is the case, or when the stigma associated with using coupons is highlighted, impression management–related concerns might lead to less coupon usage, or at least an unwillingness to admit to others that one uses coupons. In addition, although study 2 showed that the effect of nationality on coupon proneness is not due to power distance belief, future research should more formally examine the independent effects of self-construal and power distance belief. It is also possible that power distance belief may predict coupon use in some conditions. Finally, future research should examine if self-construal influences the effectiveness of other aspects of promotion, including frequent versus deep discounts (Lalwani and Monroe 2005).

Some research suggests that Hispanics in the US who strongly (vs. weakly) identify with their home culture tend to be less coupon prone because they are more loyal to core values, which translates to greater loyalty to familiar brands and less brand switching due to coupons, even if it means paying more (Donthu and Cherian 1992). Because other research suggests that Hispanics who identify more (vs. less) with their home culture tend to have greater interdependent self-construal (Aaker and Williams 1998), these findings may appear inconsistent with ours. However, the lower coupon use among Hispanics has been attributed to their lower access to coupons, due to their lower education, socioeconomic status, and choice of media (Green 1995; Kaufman and Hernandez 1990). Because our participants were either undergraduate students or subscribers of MTurk, who tend to have similar or greater education than the general population, they have easy access to coupons. Hence, our studies minimized the role of access to coupons and enabled us to isolate the distinct influence of self-construal.

DATA COLLECTION INFORMATION

The data for study 1a were purchased from Nielsen Media Research in 2013 and analyzed by Jessie J. Wang. The data for study 1b were collected at Indiana University Bloomington in October 2013 by Jessie J. Wang. The data for study 1c were collected using Amazon Mechanical Turk participants in June 2015 by Jessie J. Wang. The data for study 2 were collected using Amazon Mechanical Turk participants in June 2017 by Jessie J. Wang. The data for study 3 were collected using Amazon Mechanical Turk participants in March and September 2014 by Jessie J. Wang.

Researcher(s) own analyses calculated (or derived) based in part on data from The Nielsen Company (US), LLC and marketing databases provided through the Nielsen Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the Nielsen data are those of the researcher(s) and do not reflect the views of Nielsen. Nielsen is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.

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