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The Bottom Dollar Effect: How Resource Scarcity Influences Perceived Value and Satisfaction

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[to cite]:

Andrew D. Gershoff, Robin L. Soster, and William O. Bearden (2013) , "The Bottom Dollar Effect: How Resource Scarcity Influences Perceived Value and Satisfaction", in NA - Advances in Consumer Research Volume 41, eds. Simona Botti and Aparna Labroo, Duluth, MN : Association for Consumer Research.

[url]:

<http://www.acrwebsite.org/volumes/1015641/volumes/v41/NA-41>

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The Bottom Dollar Effect: How Resource Availability Influences Perceived Value and Satisfaction

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EXTENDED ABSTRACT

Mental accounting research suggests that pain of payment attenuates the pleasure of consumption and that consumers with depleted resources think about costs differently. The present research finds that, when consumers spend their last available resources (i.e., spend to zero), the perceived value of purchases decreases and satisfaction is attenuated.

Introduction and Background

Recent research has shown a number of ways in which depleted resources influence consumers' spending decisions (Brady 2009; Huffman and Barenstein 2005; Kamakura and Du 2012; Mishra, Mishra, and Nayakankuppam 2010; Stille, Inman, and Wakefield 2010a). For example, consumers tend to choose more prevention-oriented products as more time passes since their last paycheck, and they are more likely to choose products that are scarce when they feel financially deprived compared to others (Mishra et al. 2012; Sharma and Alter 2012). Findings also suggest that consumers spend differently, such as spending less on non-essential products during times of both macroeconomic contraction (Kamakura and Du 2012) and personal economic contraction (Brady 2009; Huffman and Barenstein 2005). Other research suggests that consumers think about both expenditures and opportunity costs differently, depending on the amount of resources at their disposal (Morewedge, Holtzman, and Epley 2007; Spiller 2011). Although it seems likely that these patterns of spending might influence consumer financial and material well-being, researchers have yet to examine whether they have implications for consumers' satisfaction with the products that they do end up purchasing.

We extend the above findings relating to resource availability by considering how the state of consumers' resources at the moment of purchase influences not only the consideration of costs, but also post-purchase satisfaction. We hypothesize that consumers are less satisfied with products and services when the purchase itself has "zeroed out" or exhausted a budget compared to when funds remain in a budget after a purchase. Specifically, we propose that, when consumers incur costs that exhaust their budgets (i.e., spend their bottom dollar), the marginal utility of those spent resources is significantly greater than economically equivalent costs that merely reduce budgets (i.e., non-bottom dollar spending). According to both the mental accounting literature (Prelec and Loewenstein 1998) and the value perspective of satisfaction (Johnson, Anderson, and Fornell 1995), these differences in the perceived cost of the resources spent should influence satisfaction.

Experiments

Study 1 used adult consumers ($n = 169$) recruited from MTurk to test whether reported feelings about spending ten dollars depends on whether the spending comes out of a budget, and whether the spending does or does not deplete available resources to zero. Findings reveal that consumers are more circumspect when spending their bottom dollar (i.e., going from \$10 to \$0), but only when that money comes from a depleting budget.

Study 2 employed a mixed design to examine the relationship between budget condition and satisfaction (H1) as well as the media-

tional role of perceived value (H2). The first factor, budget condition (exhausting versus not) was a between-subjects factor, while the second, consumption timing, was within-subjects, consumption timing (T1/T3). The context used for the study was the viewing and evaluation of short movies for an online film festival. Adult participants from MTurk (analysis based upon $n = 87$) were told that they had been given 30 [50] credits to spend on short films costing 10 credits each. Satisfaction and perceptions of film value were measured after participants viewed the T1 and film (when no participant's budget was exhausted) and T3 films (when half of the participant's budgets were exhausted). The resulting 2-way interaction of budget condition and timing supported our hypothesis; bottom dollar spending decreases satisfaction. Additionally, value perceptions fully mediated the relationship between budget condition and satisfaction at T3 (Hayes 2013).

Study 3 used a scenario-based study with students ($n = 201$) to further examine the relationship between bottom dollar spending and satisfaction. The study was a 2×2 design. All participants were to get a ticket to an attraction. A Budget factor varied whether or not buying the ticket would have exhausted a budget or not. An Acquisition factor varied whether or not participants had to use money from their budget to buy the ticket, or they were given the ticket as a gift. We predicted that, for those who had to purchase, satisfaction would be lower if their budget was exhausted compared to not. For those who received the ticket as a gift, there would be no difference by budget condition. Results supported this.

Study 4 employed a mixed design to replicate the findings from study 2 (H1; H2), while also testing whether the ease of obtaining resources had an influence on the bottom dollar effect, impacting both satisfaction with and perceived value of the films (H3). MTurk ($n = 217$) participants first had to complete actual work in order to earn credits. Participants' perception of the ease of obtaining credits was measured. Participants then spent their credits at the film festival (see study 2). Half of the participants (exhausting budget condition) ran out of credits after purchasing their second film. Similar to study 2, both satisfaction and perception of value were measured after the second film was viewed.

Budget condition, perceptions of ease of obtaining resources, and the interaction of these factors were regressed on satisfaction with the second film. A significant interaction of resource availability and ease of obtaining resources supported H3. Further analysis (Model 8; Hayes 2013) revealed moderated mediation. For those spending their bottom dollar, value perceptions mediated the relationship between ease of obtaining resources and satisfaction. This mediation did not arise for participants with resources remaining.

Conclusion

While prior models of satisfaction have focused on concepts such as product performance and expectations (Oliver 1980, 1997), this research applies a mental accounting perspective to examine how satisfaction is influenced by whether or not there are remaining resources in a budget used to make a purchase. We show that, when individuals make purchases that exhaust their budgets (versus not), satisfaction is lower (H1). Findings also reveal that perceived value mediates the relationship between budget condition and satisfaction

Table 1: Findings

Study 1 (n = 169)						
	Relative Wealth; Spend to \$0	Relative Wealth; Not Spend to \$0	Absolute Wealth; Spend to \$0	Absolute Wealth; Not Spend to \$0	Interaction	
1 = "disagree"; 5 = "agree"						
Spending seems reasonable	1.975	3.045	3.093	3.095	$F(1, 165) = 9.827; p < .01$	
I ought to save and not spend this money	4.250	3.591	3.488	3.857	$F(1, 165) = 10.945; p < .01$	
I will think extra carefully about spend[ing] this money	4.425	3.909	3.698	3.976	$F(1, 165) = 8.357; p < .01$	
Study 2 (n = 85)						
	Low resources; Spend to 0 Credits	Low resources; Spend to 20 Credits	High resources; Spend to 40 Credits	High resources; Spend to 20 Credits	Interaction	
1 = "extremely dissatisfied"; 9 = "extremely satisfied"	4.623	5.751	5.707	6.362	$F(1, 71) = 5.283; p < .05$	
Test for mediation (Hays 2013; PROCESS Model 4)						
	Effect	SE	t	p	LLCI	ULCI
Total effect of Resource Availability on Satisfaction	1.7397	0.6037	2.8819	0.0052	0.536	2.9434
Direct effect of Resource Availability on Satisfaction	0.4029	0.2996	1.3448	0.183	-0.1947	1.0005
Indirect effect (Value; 1000 Bootstrap Samples; 95% CI)	1.3368	0.5304			0.3785	2.4431
Study 3 (n = 201)						
	Low resources; Self Pays	Low resources; Other Pays (Windfall)	High resources; Self Pays	High resources; Other Pays (Windfall)	Interaction	
-4 = "extremely dissatisfied"; 4 = "extremely satisfied"	1.020	1.898	1.481	1.429	$F(1, 197) = 9.057; p < .01$	
Study 4 (n = 217)						
	Low resources; Difficult to Recoup	Low resources; Easy to Recoup	High resources; Difficult to Recoup	High resources; Easy to Recoup	Interaction	
1 = "extremely dissatisfied"; 9 = "extremely satisfied" (cf. Aiken and West 1991)	5.52	6.98	6.15	6.00	$\beta = -.26, t = -2.74, p < .01$	
Test for mediation (Hays 2013; PROCESS Model 8)						
	Effect	SE	t	p	LLCI	ULCI
Conditional direct effect of Recoupment on Satisfaction when Out of Money	0.0997	0.0734	1.3584	0.1758	-0.045	0.2445
Conditional direct effect of Recoupment on Satisfaction when Not Out of Money	-0.0046	0.0713	-0.0648	0.9484	-0.1451	0.1359
Conditional indirect effect of Recoupment on Satisfaction when Out of Money	0.3688	0.1085			0.1355	0.5684
Conditional indirect effect of Recoupment on Satisfaction (when Not Out of Money)	-0.0444	0.1249			-0.2896	0.184
Indirect Effect of Highest Order Interaction (Value; 1000 Bootstrap Samples; 95% CI)	-0.2066	0.0836			-0.3779	-0.0357

(H2), and that the perceived ease of obtaining resources also influences these relationships (H3).

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