

DO GOOD DEALS REALLY INCREASE CONSUMER SPENDING PATTERNS?

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ABSTRACT

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Annually, the average American spends thousands of dollars on goods and services, financing millions of jobs. Employees then continue this cycle, through spending their paycheck on goods and services thus continuing the cycle. It is this cycle that is at the forefront of the American economy, and thus of utmost importance to increase the profitability of businesses. In part, this can be accomplished through a greater understanding of consumer spending patterns.

This study aims to help understand consumer behavior through looking at both loss leader pricing, and the endowment theory. This was done through an on-campus experiment that looked at the effects of good and bad deals in both the retail and labor markets. Participants were placed in one of eight conditions where the price of goods, length of survey given, and order of goods presented were varied. After being offered an initial good, participants would be asked to complete a survey, and were then offered a second good. I hypothesized that the participants randomly assigned to either the “good” labor or retail market condition were more likely to purchase the second good.

The data showed that payment, the cost of the good, and order in which they were presented in was significant. Furthermore, our results show that the shopping momentum theory was not as strong as previously thought with the effect wearing off extremely quickly, such that any time between items being offered made the effect of buying the first good obsolete. This has important implications for many business decisions.

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Chapter 1 Introduction

The global economy is constantly growing, with millions of dollars changing hands everyday, between individuals and businesses. These businesses depend on these transactions to be profitable, and provide income for all those who work for the companies. This makes it imperative that we understand the factors influencing spending habits.

Loss leader pricing is a pricing strategy where retailers stimulate spending by pricing a good at below profit. Although they lose money on this first product, they do so with the hope that it will encourage buyers to continue shopping, for much higher priced goods, and significant positive profit margins. The legitimacy and outcomes of this pricing strategy has important implications for stores and retailers, in deciding pricing, coupons, discounts and promotions. As such, the theory can give method and advice on maximizing store profits.

Another important theory involving financial decision-making is the endowment theory, which focuses on how items, or in this study, money, is valued. The amount of labor or effort taken to acquire or earn the money can influence how people value and, in turn, spend the money. Programs such as unemployment compensation and government subsidies work to help provide necessities when needed. However, since this money is unearned, it might cause recipients to spend it differently to money they earned. If policy makers can understand factors influencing spending, they can better tailor these programs to be most effective.

In the present study, both loss leader pricing and the endowment theory, as they influence consumer-spending habits, are examined through an experiment conducted on

campus. Participants received either a “good deal” or “bad deal” in both the labor market and the retail market. In the labor market this is done by manipulating the difficulty of earning money, thus corresponding to the endowment theory. In the retail market this is done by changing the price of the first good consumers are offered. The price of the second good offered was uniform, at \$1.00 throughout the study. The effect of consumers’ self control is also examined.

Not only does this study provide further evidence for existing research on the loss leader pricing strategy and the endowment theory, but it also examines how the two interact together. This is important for further development of both marketing and subsidy programs, as mentioned above. For example, the outcomes off this study with have implications for how retailers should design their coupon and discount programs; how easy the coupons should be to acquire and use. For example, coupons can be simply handed out or require multiple steps in order to receive the discount. Furthermore, the study can also provide guidance on how products, services and benefits should be paired and grouped together. It may be financially beneficial to have some items near the front of the store, and some further away. Similarly, perhaps, some items should be paired together, with specific pricing strategies to ensure maximum profits.

This paper begins by describing related past literature done (chapter 2). It then explains the present experiment, and the steps used to conduct it, in detail (chapter 3). It proceeds to explain and analyze the data (chapter 4). This is followed by a discussion of the implications and conclusions of the results, along with suggestions for future research (chapter 5).

Chapter 2 Literature Review

2.1 Endowment Theory on Ownership of Goods

The endowment theory, a well-studied economic phenomenon, examines how people value items. The theory states that someone who owns an item will value it more than someone without it. In practice this is shown through sellers expecting more money for an item than buyers are willing to pay. The studies described below provide evidence for this.

In Tom et al. (2007), participants were given an object to examine. In the endowed condition, participants were allowed to keep the object, and were asked to give the lowest price they would be willing to sell the object for (their reservation price). Conversely, the other participants were forced to return the item, and were asked to give the maximum price they would be willing to buy it for. The results found mirrored those that the endowment theory would predict; those who felt ownership of the object, and were now selling, valued the object much higher monetarily than those buying, who felt no ownership of the object.

In Knetsch (1989) further support was gained for the endowment theory. They randomly gave 1/3 of participants a mug, 1/3 of participants a candy and 1/3 of the participants receive neither. All participants could see both goods, which were monetarily valued the same. Participants were then asked whether they would rather keep the good they were given or trade for the other good. Participants had a strong, significant preference for the good they were randomly given. Those who were given neither good, were asked to pick one, and showed relatively split preferences for the two goods.

Knetsch (1989) also did a similar experiment with chocolate candy and \$2 worth of money. The chocolate candy was valued at \$2. Again, participants showed a strong preference for whichever good they received, wanting significantly more of the other, money or chocolate, to trade. In addition to adding support for the theory, this study also showed that money appears to be interchangeable with objects.

Another study by Nayakankuppam and Mishra (2005) also looked at the endowment theory. In their first study they gave participants a pen, and told them they were either buyers or sellers. They were then asked to price the pen, listing six distinct thoughts they had about the pen, rating them as negative or positive thoughts. As foreshadowed by the previous studies, the sellers listed significantly higher prices than buyers. However, this study also found that sellers listed more positive thoughts about the pen, than those buying the pen. If this is a reflection on how the two parties respectively view the pen, this might help explain the endowment theory. In their second experiment, participants were given coffee mugs, and told several positive and negative attributes about it. They were then asked to give prices for the coffee mugs, as either a buyer or seller. They were then given the previously shared attributes in true or false form. Sellers were much more accurate, and quicker to answer about positive traits than negative traits, the opposite held true for buyers. In their third experiment, participants were shown a pen of clear lesser quality. This forced buyers to examine the positive aspects of the original pen, evidenced by their increase in reservation prices. Alternatively, it forced sellers to see the more negative aspects of the pen, thus decreasing their prices.

These three studies examined the endowment theory in different ways. The first two focused on the value participants placed on various objects when ownership was

manipulated, while the third offered an explanation of this through positive and negative thoughts attributed to items. Although these studies examined ownership of items, the theory can also be applied to having physical in money in hand. The endowment theory suggests that people who really feel ownership of the money given to them will value it more than those who don't feel as strong ownership. People are more likely to feel ownership of the money if they feel like they earned it, and have positive feelings about such money. This is emphasized in the present study through the "bad deal" on the labor market, where participants have to spend a greater time commitment earning the money, and thus value the money more. The endowment theory suggests that these participants will be less likely, than others, to purchase the second good offered, as they will view it as being a worse deal since they place a higher value on the income that they earned.

2.2 Endowment Theory Applications in Tax Refunds and Government Subsidies

In America, every working individual is forced to pay significant income taxes during the year. Then once a year, these individuals will receive a tax refund, which is often sizable in amount, averaging more than \$1000 per refund (Souleles 1999). While many taxpayers typically expect a refund, the amount of which is often unknown. Therefore, this tax refund lag is, to some degree, an example of unexpected income, and indisputably raises one's income. As participants are being paid in the present study this is immediately relevant. Souleles (1999) analyzed the consumer expenditure survey and found that in response to receiving tax refunds, consumption increased by 35% of the refund. This shows that people are more likely to spend the unearned money than spending earned (regular) money.

The endowment theory has significant implications for how people spend money. Beyond the implications discussed above, the present study also has an additional component of participants unexpectedly receiving the money, which can be studied through empirical research. Once in awhile someone will unexpectedly receive a large sum of money, whether it is through inheritance, the lottery, a gift, or some other method. It is not unusual to hear of stories about such gains happening and then people spending that money irrationally and in a very short time frame. Several studies have looked at these windfall gains specifically.

Reid (1962) looked the consumption after windfall gains. This study found that there was no significant increase in non-durable goods consumption, which he suggested was because people used such gains to budget throughout their life. Similarly Kreinin (1961) conducted a study about windfall gains, surveying Israeli families. He found little expenditures on non-durable goods as well.

However Bird (1965) did a similar study, looking at an urban consumption survey in 1950, looking specifically at those who had received a “soldiers’ bonus” as a result of being a WW2 veteran. He found that those who received the bonus were very likely to spend this money, at a much faster rate than their typical expenditures.

These studies show that simply by participating in the present study and receiving the higher payment, participants may be more likely to spend money than those receiving the lesser payment. Addition, according to the endowment theory, those who work harder for this money, represented in the present study by the longer survey and thus are in the “bad deal” in the labor market, are less likely to make purchases. This predicts that those who receive the higher payment and shorter survey will be most likely to purchase goods.

2.3 Self Control Effects on Purchasing

There are also a huge number of individual factors which effect purchasing habits. One of these examined in the present study is self-control. When people see an item they want, those with little self control are less likely to have the restraint to resist, and more likely to make impulsive consumer decisions.

In a study by Haws et al. (2011), participants partook in a survey measuring their self-control in terms of spending habits. A month later, in a seemingly unrelated experiment, participants were given a scenario in which they were asked to imagine making an unplanned purchase. In this experiment a “mock” store was set up, and consumers had to indicate how much they would buy/sell items for. To ensure accurate reporting, consumers would potentially be responsible for buying or selling the good. This study found, unsurprisingly that low self control resulted in shoppers being more likely to make purchases during the experiment. However, the study also found that this effect could be reduced if participants were induced to think about the outcome (credit card debt, etc.). Additionally, people who spend time earning money will also devote more time to thinking about how to spend that money, as opposed to people who get the money almost instantaneously. Thus, this suggests that people in the “bad deal” labor market will be less likely to purchase the second offered item. However, people with low self-control, will be more likely to purchase the goods, regardless of their condition in the retail market.

These individuals, with low self-control, are more likely to buy goods than others. As this is a reflection of internal characteristics, and is independent of external factors,

including ones' financial situation, this can be an extreme stressor on ones' finances, and in its' extreme form debt. Therefore, shopping can cause feelings of guilt and regret in these individuals (Christenson et al. 1994). It is then natural for these consumers to try to alleviate such feelings both before and after purchase. One way that consumers can do this is through purchasing goods that appear to be discounted, or a good value. Thus compulsive buyers will be more receptive to discounted prices (Kukar-Kinney 2012). These consumers, since they presumably shop more, are more likely to be aware of the immensity of discounts offered. Through buying a discounted product consumers are able to justify the purchase to themselves and even enhance positive feelings they have after purchase. (Faber and O'Guinn 1992). This suggests that those in the good deal in the retail market are likely to buy the first good with increased frequency.

Kukar-Kinney et al. (2012) studied compulsive buyers extensively. They used a survey with 314 participants, primarily women. The survey evaluated both individual's compulsive buying habits, and how they thought about pricing. The survey found that compulsive buyers are significantly more price conscious, or receptive to changes in price, particularly when it is a discounted or sale price. Furthermore they found that compulsive buyers, or those with low self control, perceive the transaction value as being higher, and thus get greater excitement from a good deal. This excitement can then propel them into making future purchases.

These studies show that people with low self-control are likely to make impulsive purchases. Therefore, they are more likely to purchase both the items offered in the experiment, the shot glass and car USB charger, which are both non-necessities, and thus unplanned purchases.

2.4 Effects of Pricing

Pricing also has a very strong impact on consumer spending, as found in numerous studies. Traditionally, higher prices are seen as a deterrent towards purchasing goods. However, in some cases, these studies suggest that, the opposite is true. Higher prices can be indicative of quality and desirability, and conversely lower prices of lower quality. These studies listed below are pertinent to the present study as they help predict the likelihood of participants purchasing the initial good offered. Much research has been done examining the effect of discounts on consumers.

Schindler (1989) discussed the excitement consumer's get when they think they get a discount, and the effect of such feelings on shopping. He spoke about how these increase the likelihood of a consumer purchasing the good, because of increased excitement and pride at getting a good deal.

Lichtenstein, et al. (1993) explored this phenomenon. They discussed several different ways in which price can effect purchasing decisions. As aforementioned, they found that price can be an indicator of quality. In this case, price has a positive correlation with likelihood to purchase an item. Therefore, when a good is more expensive, as it is in the "bad deal" in the retail market in this study, participants should be more likely to purchase the good, here a shot glass.

Furthermore, they described "prestige sensitivity" in which consumers want to give off signs of being able to afford higher priced items, as a sign of wealth. This in particular may be present in the current study as it is being conducted in a small college. This increased the chance that participants will know the experimenter, and thus what to seem able to afford higher prices.

These studies showed a positive correlation between price and purchasing. This indicates that people in the “bad deal” in the retail market would be more likely to view the product as higher quality due to the increased price and thus be more likely to purchase it.

2.5 Loss Leader Pricing

Heilman et al. (2002) conducted a study regarding consumer’s unexpectedly receiving coupons in store. This study is highly relevant to the present study, as participants are offered a very discounted good for purchase, similar to a coupon. They hypothesized that receiving an unexpected coupon improves the mood of consumers, and makes them feel like they have more money (income effect), thus making them more likely to make additional purchases. They researched at two grocery store chains, and asked for participants, who were required to be planning on purchasing at least 15 items. They were also asked if they were planning on making a purchase within several categories. Approximately half of the participants, 105 individuals, would then be given a \$1 coupon off a good in one of the categories. The coupon was not brand specific, allowing for greater likelihood of use. After shopping, participants would give their receipts to the experimenters for examination. Experimenters found significant results in several dimensions. Those with coupons given, on average, bought more than 11 more items than planned (47% more) as opposed to those without coupons buying about seven more items than planned (31% more). Monetarily, those in the experimental group spent an extra \$8 (11% more).

Another study by Wheatley and Chiu (1977) also examined the effect of price and store image on purchasing. They again discuss increased price being an indicator of increased quality. In their study they presented housewives with carpet samples, and asked them to rate the quality of it. They found that higher income participants are more likely to view products as higher quality, thus increasing the likelihood of purchase, which has major implications for the present study. Some of our participants are given a greater amount of money for the study, and thus have an increased income, which would thus encourage them to buy the product.

However, they also talk about negative implications of price. They speak about “price consciousness,” where consumers aim to get the lowest possible price. In this study, this would suggest that participants in the “good deal” in the retail market are more likely to purchase the product. This should have no effect on people who are offered the market price for a good, unless they think that they can get a better deal elsewhere, in which case they would be less likely to purchase the good. Additionally, sales, or discounts can cause perception of an even lower price.

These studies contradict each other, thus suggesting variable results for people choosing to purchase the shot glass. Some of these studies suggest that people who are offered the shot glass for the cheaper price will be more likely to purchase the good. However, other studies suggest the opposite, in that the higher price will attract more people to purchase the shot glass.

2.6 Shopping Momentum

Dhar et al. (2007) discussed the idea of “shopping momentum,” which is that once someone buys a product they are more likely to buy a second product. They studied this in a number of experiments. In the first condition, students were paid for their participation, and randomly selected for one of three conditions. In one they were offered a key chain. In the second they were offered an educational cd, deemed by a previous survey to be a likely purchase. In the third condition they were offered a light bulb, previously deemed to be an unlikely purchase. In both the second and third condition, regardless of whether they purchased the product, participants were then offered the chance to purchase the key chain. As predicted, significantly more participants in the second condition, as opposed to the third condition participants, purchased the key chain.

Xu and Wyer (2007) did a similar study. However, instead of looking at purchasing, they looked at reporting preferences. They found that if someone reported a preference for an initial good, then they were later more likely to purchase another item. This study shows the immense strength of the shopping momentum effect.

Stilley et al. (2010) discussed the idea of “in-store slack,” or the notion that consumers typically anticipate making some unplanned purchases, particularly accounting for “forgotten items.” Through examining the order of consumer’s purchases they found that the effect of coupons was dependent on when it was received. If the coupon was received before this “in-store slack” had been spent, then the coupon didn’t increase total amount of consumer spending on the trip. Instead, it just caused variation in the unplanned items purchased. However, if the coupon was received after the “in-store

slack” had been spent, then the final expenditures would be greater, as there would be an increase in goods purchased.

Although in the present study the time the coupon was given is not manipulated, the study is still highly relevant. As participants will not be planning to spend money in the present study, they will have little, or no “in-store slack”. Therefore, it is as if they have already spent their entire “in-store slack” and thus, like the participants in Stilley’s study, are more likely to purchase additional goods. Therefore, those who do receive the coupon, or discount, should be more likely to purchase the second good.

This shopping momentum effect indicates that those who purchase the first good in the good deal in the retail market, will then be more likely to purchase the second good as well. This effect is taken into account in stores, with loss leader pricing, where one item is priced below retail value, to encourage more purchases.

However, some researchers have disputed the shopping momentum theory through looking at the reverse. Instead of saying the buying one good makes it more likely that you will subsequently purchase a second good, these researchers examined the effects of not purchasing the initial good.

Mukhopadhyay and Johar (2009) examined this effect. They hypothesized that not purchasing the first good would increase the likelihood of purchasing the second good. They explained this through people rewarding themselves for their own self-restraint. They did several experiments to examine this. The first involved shopping scenarios and surveys. These showed that through increasing the significance of the past restraint, purchase of the second good became much more likely. Another experiment of

theirs looked at how we reward ourselves for not making the previous purchase, which supported their previous findings.

Louro et al. (2007) provides further support for this theory, finding that previous shopping restraint helps to justify new purchases. Mick and DeMoss (1990) conducted a survey of undergraduate students, finding similar results. They described to participants the act of giving, and the concept of giving oneself gifts. They then asked participants to describe the last time they had given themselves a gift, and why they had done so. Participants primarily said that in buying themselves a gift, they were rewarding themselves for a prior achievement.

These studies show that it is uncertain whether participants are more or less likely to buy the initial good if it is cheaper. Similarly, the effect of purchasing the first on the purchase of the second good is unknown.

Chapter 3 Experimental Design

To test the above-discussed hypotheses, I conducted an experiment at Union College, a small liberal arts college in upstate New York. Demographically, according to the Union College website, as of 2012, 80% of students were Caucasian and from America. 100 subjects were recruited, all at the undergraduate level, and spread between all class years. 64% of participants were female.

In order to conduct the experiment researchers applied to both the Student Research Grant Committee (SRG) and the Human Subjects Research Committee (HSRC). The SRG is for supporting outstanding undergraduate research program at Union college. Both the faculty advisor and the SRG committee approved the

applications. To receive the funding, the experimenter must prove the research to be unique and important to the field. The fund gives fiscal support for such projects. We really appreciate the support for this ground. Meanwhile, the HSRC application allows researchers to work with participants having ensured minimal emotional or physical danger will come to subjects as a result of their participation in the study. Furthermore, it ensures that, when possible, as in this study, that all responses are kept anonymous. To be approved, all materials, questionnaires, consent forms and debriefing language were submitted along with an explanation of the study.

Once the study was approved, experimenters set up at a table in the Reamer Campus Center, a central location on campus, with a large flow of students, which is home to multiple dining options, the post office, and meeting rooms. A large poster was put in front of the table reading “5 minute survey/ Get paid \$\$\$.” On the table were pens, papers, and bags containing the goods (see Appendix A for photos). Participants could not see the goods when at the table, until the experimenter presented them. Many students saw the sign and came up to take the study. Additionally experimenters asked passing students to participate.

To simulate a good or bad deal in the retail market, payments and the price of the first good offered varied. Half of the participants were given \$2.75, and offered the first good, either the shot glass or USB car charger for \$1.00. Meanwhile, the other half of participants would receive \$2.50 but the first good would be priced at \$0.25. The latter was considered to be the good deal in the retail market, as the good was significantly cheaper. Meanwhile, in the labor market this was done through giving participant either a short or long survey. Those who received the short survey were considered to be in the

good deal in the labor market as they finished the study, and thus received payment, sooner.

Participants would randomly be placed in one of eight conditions consisting of the three variables listed below. If multiple people approached the table at the same time, all would be placed in the same condition. These 8 conditions are shown in Table 1 below.

Table 1: Experimental Conditions

Payment	Short Survey		Long Survey	
	Shot Glass offered first	USB offered first	Shot Glass offered first	USB offered first
\$2.50	Lp-Ss-Sg	Lp-Ss-Us	Lp-Ls-Sg	Lp-Ls-Us
\$2.75	Hp-Ss-Sg	Hp-Ss-Us	Hp-Ls-Sg	Hp-Ls-Us

Having agreed to participate, subjects in the condition Lp-Ls-Sg, would be told they would receive \$2.50 at the completion of the study. They would be offered the shot glass first, and receive a short survey. Afterward, they would be given the opportunity to purchase a car USB charger.

All participants would be asked to read and sign a consent form. The experimenter would then explain that the study was looking at purchasing decisions. As such, the experimenter would be offering two opportunities to purchase a good during the study. If the subject chose to buy them, the cost would be subtracted from their final payment. They were reminded of their final payment again.

Participants would then be offered the opportunity to buy the shot glass. Since their payment was \$2.50 the shot glass would be \$0.25. However, if they were in the higher payment condition of \$2.75, the first good would be priced at \$1.00. If the subject

wanted the shot glass they were given it immediately, and told their new final payment of \$2.25. Participants had to decide whether to purchase the good prior to moving on with the study and taking the survey.

These payments and prices were chosen specifically. The \$0.25 price was chosen to make participants feel as though they were receiving a great deal on the item and thus be likely to buy the item, whereas the \$1.00 price was set at roughly retail value. This manipulation was required to be able to examine the shopping momentum. To study the shopping momentum theory it is necessary that some people are more likely to purchase the first good than others, which in this study is accomplished by the manipulation above.

Payments were set to take the income effect into account. The income effect theory states that people are more likely to make purchases when they have more money. Therefore, we tried to reduce large differences in payments by condition. All participants had either \$2.50 or \$2.75 when offered the first good. If participants bought the first good then when offered the second good they will have \$2.25 and \$1.75 in income respectively. If they didn't buy the first good they had \$2.50 or \$2.75. While the income effect could not be eliminated, this price differential allowed it to be minimized.

Participants would then be asked to complete a survey (see Appendix B). Depending on the condition, the survey would be either long or short. The short survey began with asking for demographic information, such as gender and major. It then asked nine Likert scale (from 1-5) situational questions regarding self-control. On the second page there were six short answer questions. These questions asked about topics related to economics and spending habits. One question asked about money spent on gas, which was important as it told whether the participant had a car, and thus any need for a car

USB charger. These questions were designed to make subjects feel as though they earned the payments.

The longer survey included all questions on the shorter survey in addition to two more pages of short answer questions. These questions were also about economics topics. The longer survey was designed to take a longer period of time, thus increasing the ownership the participant felt over the money. In a trial run, the longer study took 3:56min longer to complete (1:58min compared to 6:54min) or more than three times longer.

After completing the survey participants would be offered the second item. Regardless of condition this item would be priced at \$1.00. The second item would be whichever wasn't previously offered, either the shot glass or the USB car charger. If they bought the item, they would be given it and told their final payment.

Subjects would then be thanked for their participation, debriefed and given their payment.

Chapter 4 Results

The number of shot glasses that participants bought is displayed below in Table 2. The condition is shown by the combination of the first three columns. The 4th column, labeled "Number of Participants" tells how many participants were in this experimental condition. The following column, "% Bought Shot Glass," tells the percentage of participants in that condition who bought the shot glass. As can be seen participants who were paid \$2.50 for their participation, and received a long survey, with the shot glass offered first were the most likely to purchase goods. Meanwhile, those who received

\$2.75 as payment, with a long survey, as a group, were least likely to purchase any good with no participants purchasing.

Table 2: Percent of Participants Purchasing Shot Glass by Condition

Payment	Survey Length	First Item Offered	Number of Participants	% Bought Shot Glass
2.5	Short	Shot Glass	10	40%
2.5	Short	USB	15	13%
2.5	Long	Shot Glass	15	47%
2.5	Long	USB	10	20%
2.75	Short	Shot Glass	18	28%
2.75	Short	USB	7	14%
2.75	Long	Shot Glass	10	0%
2.75	Long	USB	15	0%

We first look at the effect of payment scheme on purchasing the shot glass. Table 3 lists the percentage of subjects purchasing the shot glass as a function of their payment for participant. Those who received \$2.50 (row 1) were more likely to buy the shot glass than those who received \$2.75. 30% of those in the \$2.50 condition bought the shot glass, as opposed to 12% in the \$2.75 condition.

Table 3: Percent of Participants Purchasing Shot Glass by Payment Condition

Payment	#Subjects	% Bought Shot
\$2.50	50	30%
\$2.75	50	12%

Furthermore, we examined the effect of the order of the goods offered. Table 4 shows the percentage of participants purchasing the shot glass under different payment and order conditions. On average, those who were offered the shot glass first were more likely to buy it. The percentages show that those who were in \$2.50 condition, with the shot glass offered first (row 1), were the most likely to purchase it. Furthermore, even when the price was stable, those who were offered the shot glass first were most likely to purchase. Overall only 11% of those who were offered the shot glass second, for \$1, purchased it. Those who were offered the shot glass first for \$1 bought with 18% frequency.

Table 4: Percent of Participants Purchasing Shot Glass by Payment and Order Condition

Condition	Percent of Subjects Purchasing Shot Glass
\$2.50, Shot Glass First	44%
\$2.50, USB Charger First	16%
\$2.75, Shot Glass First	18%
\$2.75, USB Charger First	5%

To further examine the effects of each condition, we conducted probit regressions. The dependent variable is whether participant purchased the shot glass. We regressed each condition, length of survey, initial payment and the cost of the shot glass on the dependent variable separately. We first looked at the effect of the order in which the goods were presented, as shown in Table 5, column 1. This shows that the order of goods presented had a significant effect on whether participants purchased the shot glass. As a robustness check, participant's social economic factors were also examined. These variables were owning a car, being 21+, gender, having a job, knowing the US GDP, amount of last purchase, self-control and owning short-term investments.

All variables by self-control and amount of last purchase were dummy variables. When price was \$0.25, Cost of Shot was coded as "0", and when price was \$1.00, this was coded as 1. Similarly payment, and survey length were coded as "0" when they were \$2.50 or the shorter survey respectively, and "1" when otherwise. Receiving the shot glass first was coded as "0" for order, as was answering yes to being 21+, owning a car, or having investments. Knowing the GDP was labeled as "0." Female was labeled as "0."

Table 5: Regressions on Whether People Bought a Shot Glass

	Independent Variables			Dependent Variable Bought Shot Glass		
	(1)	(2)	(3)	(4)	(5)	(6)
Con.	-0.52	-0.32	-0.52	1.08	-0.15	1.31
Cost of Shot Payment					-0.96* (0.31)	-1.03*** (0.38)
Survey Length Order		-0.67** (0.30)	-0.65** (0.30)	-0.83** (0.37)		
21+				-0.27 (0.35)		-0.37 (0.35)
Car	-0.73** (0.30)			-0.78** (0.37)		
Gender		-0.41 (0.30)		-0.57 (0.36)		-0.58 (0.36)
Job				-0.24 (0.35)		-0.27 (0.35)
KnowGDP				-0.28 (0.41)		-0.34 (0.40)
Last Purchase Self Control				-0.02 (0.36)		0 (0.35)
Shortterm				-0.29 (0.43)		-0.16 (0.42)
Longterm				0 (0)		0 (0)
Number of Observations		100	94	-0.04 (0.04)	100	-0.04 (0.03)
				0.28 (0.66)		0.48 (0.68)
				0.04 (0.49)		0.16 (0.49)

*Statistically significant at the 0.10 level.

**Statistically significant at the 0.05 level.

***Statistically significant at the 0.01 level.

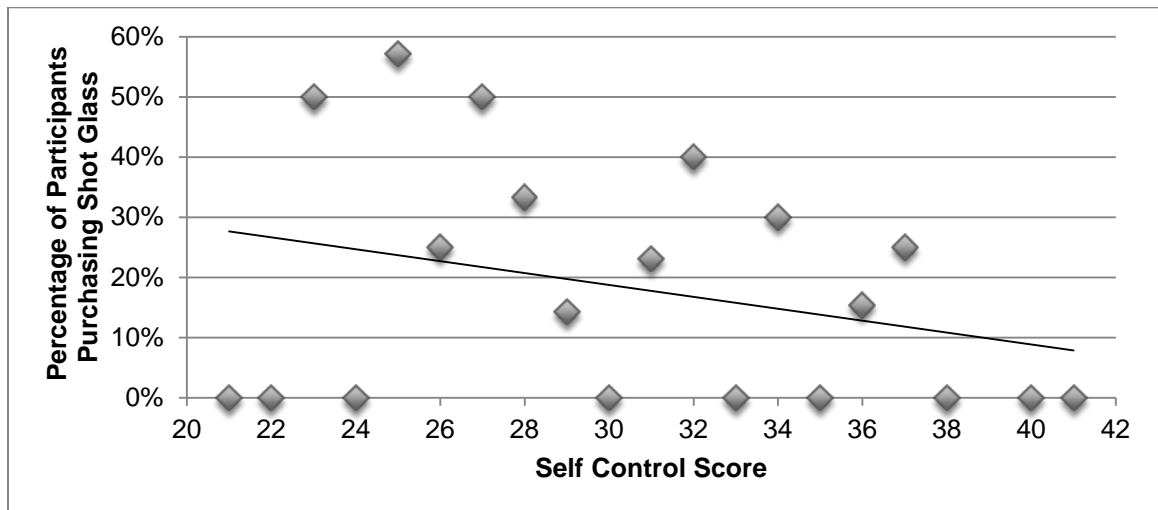
The cost of the shot glass varied between \$0.25 and \$1.00, dependent on payment and the order of goods presented. 25% of the total participants were offered the shot glass for \$0.25. This varying cost proved to be very important, and likely accounts in part, for the significance of both the payment and order variables. Again, additional independent variables proved to be insignificant. Similarly, payment proved to have a significant effect. Other variables were used as a robustness check and none were found to be

significant.

A major component of this study was examining how the survey length impacted purchasing decisions. However, there was no condition for which the length of the survey had a significant effect on purchasing decisions, as can be seen in column 6, table 5.

This study also looked at the relationship between self-control and purchasing decisions. Although, they are not significant in regressions as in table 5, looked at the relationship in different ways. Graph 1 below shows the self-control score for all subjects, in relation to the percentage of participants who purchased the shot glass. The self-control score was calculated from nine five-point scaled questions asked of each participant, some of which were reverse scored to ensure validity. Scores ranged from 21 to 42, with higher scores indicating greater reported levels of self-control.

Graph 1: Percent of Participants Purchasing Shot Glass as a Function of Self Control



Although these data points are not linear, they are clustered towards those with

lower levels of reported self-control being more likely to purchase, which fits our hypothesis. However, a regression with just self-control scores and purchases also found it to be statistically insignificant.

Only four people chose to buy the USB charger in this study. As these purchases were spread out between conditions, there were no significant effects for any variables examined in this study, in relationship to purchasing the USB car charger. Therefore, the USB car charger is not discussed in this chapter and reasons for the lack of purchases are discussed in the following chapter.

Chapter 5 Discussion

5.1 Summary of Findings

This study examines factors influencing purchasing decisions, through a college campus study. It found that participants were significantly more likely to purchase the shot glass if it was offered first, before they completed the survey. Those who received \$2.50, the lower payment option, and were offered the shot glass for \$0.25 were most likely to purchase. However, purchasing the first good, and the length of the survey had no impact on purchasing the second good. This shows that loss leader pricing, which is setting the price of one good at an extreme discount in hopes of stimulating further, more profitable, purchases is not an effective pricing strategy. Furthermore, it shows that the shopping momentum effect, where consumers are more likely to purchase a second good after buying the first is weaker than previous research suggests. The length of time it took to complete either survey eliminated any effect the shopping momentum theory may have had. Similarly, the endowment theory, which suggests people will be less likely to spend

money after having it in their possession for some time, proved to be weaker than expected, since there was no effect of the length of the survey, and thus time having the money. Other demographic factors also proved to be insignificant in purchasing decisions.

5.2 Theoretical Implications

As seen in the chapter 4, it is clear that the data gathered does not completely support the hypotheses previously discussed. However, there are still many important findings. The major problem with the data is that very few subjects purchased the USB car charger.

There are several potential explanations for this. To have use for a USB car charger it is necessary to have a car. Furthermore, as for general usage only one charger is needed per car, subjects who already own a charger are presumably less likely to purchase one. These two factors may explain why only 4% of subjects purchased the USB car charger. Had a different good been chosen, it is possible that the hypothesized effects would have shown true. As the order of the USB charger and shot glass were randomized, it is clear the overall lack of purchasing the USB charger was not a result of experimental manipulations.

The length of the survey proved to be insignificant. This result contradicts the shopping momentum theory, which states that people are more likely to buy a second good if they have already bought an initial product. This typically manifests in stores as customers being offered extreme discounts on one product, with the expectation that this will cause them to buy other goods with a higher profit margin. Therefore, theoretically,

those with the shorter survey should be more likely to purchase the second good because the shopping momentum effect will be more recent, and thus stronger. However, this data suggested that this shopping momentum effect, assuming that the effect does exist, as previous research suggests, is extremely short-lived. This is of great importance to store owners. Offering promotions with the shopping momentum theory in mind can presumably increase sales, they can be a costly mistake if not done correctly. This study suggests that subsequent goods must be immediate, and require minimal effort for the consumer to purchase.

Additionally, this finding provides mixed findings for the endowment theory. Participants were less likely to purchase the second good after they had held onto the money for longer, which follows the endowment theory. However, the length of the survey had no impact on purchasing decisions, which is contrary to the endowment theory. These results suggest that once the endowment theory comes into effect, it does not become stronger.

This is important for many programs and individuals. Many organizations will do giveaways and sweepstakes in return for filling out short questionnaires. This research suggests that they can extend these questionnaires is no impact on future purchase decisions, which will allow for better and more complete data gathering.

Furthermore, there is no need for retailers to make coupons that require more effort to use (such as scratch off tickets, etc.). This study suggests that while these efforts will not hurt the store, they will not help, and are a waste of resources.

With the price held constant, subjects who were offered the shot glass first were more likely to purchase it. This is important for retailers to be aware of for a variety of

reasons. If the first good offered is what customers are most likely to purchase, as suggested by this study, retailers should make sure they put goods with the highest profit closest to store entrances.

The lack of purchasing of the USB is also important. It shows that even when prices are at an extreme discount, customers won't change their spending habits. It is important that retailers understand this is pricing and placement strategies.

On the other hand, individuals should be very conscious of their levels of self-control levels. Those with low self-control are more likely to make rash decisions to purchase items. While in this study the goods were cheap enough that it was not detrimental to the individual, excessive spending in everyday life can be extremely harmful. Being aware of such difficulties can help combat such problems.

Section 5.3 Future Research

This study gives suggestion for future research. The study could be repeated with a good besides USB car chargers. This may allow for a better reflection of purchasing habits, and how the different conditions impact such decisions. However, the good would have to be chosen not to have similar biases and problems as the USB car charger.

Additionally, this study was conducted in a very artificial setting. Participants were relatively uniform, and generally from similar demographics. While results of this study can theoretically be extended, factors could have different effects when in a real life situation. A study with more resources could conduct the study in a more realistic setting, such as a store. This would also remove the income effect that the current study has, with subjects being paid for participation.

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Appendix A

Table set up with participant for conducting study



Appendix B: Surveys

Short Survey

Please tell us something about yourself.

Gender _____

Age _____

Expected graduation year _____

Major(s) _____

Please circle the best response.

	Not at all true		Somewh at true		Very true
I always get things done by the time I say I will	1	2	3	4	5
I go to the gym as often as I'd like	1	2	3	4	5
When I have a special treat in the cupboard (chocolate, cookies, ect) I eat it immediately	1	2	3	4	5
I am able to save up for big expenditures easily?	1	2	3	4	5
I am usually on time/early to events?	1	2	3	4	5
I often find yourself drinking more that I planned	1	2	3	4	5
I typically don't finish books that I start	1	2	3	4	5

	Not at all true		Somewh at true		Very true
I rarely get outwardly angry at other people	1	2	3	4	5
I wake up when I plan to	1	2	3	4	5

Please answer the following questions.

What was the last purchase you made (not on declining or bookstore) How much did it cost approximately?

How much do you (or your parents for you) spend on gas per term?

What was America's GDP last year (in trillions)?

What was Schenectady's GDP last year?

Do you own any short term investments?

Do you own any long term investments?

Do you currently have a job (including work study)?

Long Survey

Please tell us something about yourself.

Gender _____

Age _____

Expected graduation year _____

Major(s) _____

Please circle the best response.

	Not at all true		Somewh at true		Very true
I always get things done by the time I say I will	1	2	3	4	5
I go to the gym as often as I'd like	1	2	3	4	5
When I have a special treat in the cupboard (chocolate, cookies, ect) I eat it immediately	1	2	3	4	5
I am able to save up for big expenditures easily?	1	2	3	4	5
I am usually on time/early to events?	1	2	3	4	5
I often find yourself drinking more that I planned	1	2	3	4	5
I typically don't finish books that I start	1	2	3	4	5
I rarely get outwardly angry at other people	1	2	3	4	5

	Not at all true		Somewh at true		Very true
I wake up when I plan to	1	2	3	4	5

Please answer the following questions about your investments and area demographics.

What was the last purchase you made (not on declining or bookstore)?

How much did it cost approximately?

Do you own a credit card? How many?

Do you own a debit card? How many?

How often do you use your credit cards for purchases?

Do you use your credit card for online purchases?

How often do you use your credit card for online purchases?

How many banks are you affiliated with?

What were your top reasons for choosing your primary bank?

Overall, how satisfied are you with the bank you use most often?

What is the largest single purchase you've ever made? How much did it cost?

Do you own any short term investments?

Do you own any long term investments?

Do you currently have a job (including work study)?

How much do you (or your parents for you) spend on gas per term?

What is the population of America?

What was Americas GDP last year (in trillions)?

What is the population of Schenectady?

What was Schenectady's GDP last year?

What is the population of Albany?

What was Albany's GDP last year?