

Are ‘Adult Sources of Windfalls Destined to be Spent ‘Responsibly’?
(And Are Other Windfalls Spent Hedonistically?)

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Are 'Fun' Sources of Windfalls Destined to be Spent Hedonistically? (And Is the Other Spending on Windfalls Spent Responsibly?)



My favorite
childhood
memory is
not paying bills

Abstract

In 2017, Richard Thaler was awarded a Nobel Prize for his work in developing Behavioral Economics. While much of economics assumes that people act rationally, Thaler's work proves that we are not only not always rational, but we are predictably irrational. When asked how he would spend the roughly \$1.1 million in prize money he responded, "This is quite a funny question." He added, "I will try to spend it as irrationally as possible."

We know that affective tags for money exist but what specifically are those affective tags? More specifically still, is one of those tags for sources of income "fun," and if so, does that affect whether the money will be spent on fun? Classical economics would assume that satisfaction comes from the consumption of goods and services, that money is a medium of exchange, and that the source of that medium of exchange does not enter into the choice of the goods or services consumed. Thaler's (1999) works show that people create mental accounts, indicating that the source of the money may not be as completely irrelevant as classical economics predicted. By understanding more about what those affective tags are and how they affect decisions to use money, we become better predictors of irrational economic behavior. This is important because where irrational behavior is suboptimal behavior, if we can anticipate it, we can construct environments to support better choices.

We find that fun sources of income are significantly more likely to be spent on a fun expenditure. We were unable to find support for the opposite, that more 'adult' sources of income are

more likely to be spent on more adult uses like paying down a credit card or paying regular household expenses.

Introduction

This past year, Richard Thaler was awarded a Nobel Prize for his work in developing Behavioral Economics. While much of economics assumes that people act rationally, Thaler (1999) finds that we are not always rational. Dan Ariely's (2008) work asserts however that we are predictably irrational. When Thaler was asked how he would spend the roughly \$1.1 million in Nobel prize money, he responded, "[t]his is quite a funny question." He added, "I will try to spend it as irrationally as possible."

We know that affective tags for money exist (Henderson and Peterson, 1992, Winkelmann et al. 2011, Bradford, 2008, Levav and McGraw, 2009) but what specifically are those affective tags? More specifically still, is one of those tags for sources of income "fun," and if so, does that affect whether the money will be spent on fun? Classical economics would assume that satisfaction comes from the consumption of goods and services, that money is a medium of exchange, and that the source of that medium of exchange does not enter into the choice of the goods or services consumed. Frederick (2005) found that the more cognitive reflection that occurred, the less non-rational behavior occurred. Thaler's (1999) work show that people create mental accounts, indicating that the source of the money may not be as completely irrelevant as classical economics predicted.

By understanding more about what those affective tags are and how they affect decisions to use money, we become better predictors of irrational economic behavior. This is important because where irrational behavior is suboptimal behavior, if we can anticipate it, we can construct environments to support better choices.

Literature Review

According to Thaler's (1999) mental accounting theory, people create different mental accounts like long-term savings and have different marginal propensities to consume from each account.

Academic literature supports mental accounting theory from a regular income flow or from an irregular, lump-sum, windfall (Johnson, et al., 2006; O'Curry, 1999; and Souleles, 2002), and supports the periodic reconciliation of people's mental accounts for income and expense (Camerer et al., 1997; Heath and Soll, 1996; Read, et al., 1999; and Rizzo and Zeckhauser, 2003).

Characteristics of the use of mental accounts has been studied by Karlsson, et al. (1999), who reported that cash spending on a durable good depended on compatible reasons for saving. Abeler and Marklein (2008) and Benjamin (2006) found that math aptitude affects mental budgeting, and Cheema and Soman (2006) and Wertenbroch (2001), concluded that mental budgeting was a matter of self-control. Arkes, et al. (1994) found that a greater percentage of a small windfall was spent than that from the same amount of anticipated ordinary income, indicating that foreknowledge of income is a factor in saving, supporting the findings of Rucker (1984) and consistent with the findings of Karlsson, et al. (1999). Trump, et al. (2015) found that individuals made riskier choices with a stranger's money than with a friend's money. Whether income was as earned affected responses (Boylan, 2010), and whether earned income was a windfall or restores a status quo was found to be significant (Epley and Gneezy, 2007; Agarwal and Qian, 2013).

The size of the income can also be significant. Rucker (1984) studied the retroactive payment of a raise approved by a university, reversed by the Federal Pay Board but then reinstated by the U.S. Supreme Court and found that the size of the windfall was the most important factor for deciding how the funds were used, although the length of time that the recipient had to anticipate the income was also significant. Chambers, et al. (2009) studied responses to small hypothetical tax rebates of several and found that at some amount over \$600, materiality was significant in how the money would be used.

Karlsson, et al. (1999) noted that individuals considered the future consequences of spending in their mental budgeting, indicating that the permanence of the income might be significant. Friedman's (1957) permanent income hypothesis says that people will spend money consistent with their perceived

permanent income level. Similarly, Blinder (1981) posited that a permanent tax decrease would elicit more spending than a temporary tax cut. Parker (1999) found that a temporary, end-of-year reduction in the social security tax for high-income wage earners was spent when received, not averaged evenly over the fiscal year. Hsieh (2003) studied large, regular bonuses associated with the annual Alaska Permanent Fund payment, which was fully anticipated and found no spike in consumption. However, consumption by the same households was very responsive to income tax refunds, suggesting that predictable and regular payments are built into consumption decisions (Hsieh, 2003). Browning and Collado (2001) studied Spanish panel data to measure the effect of customary, predictable bonus payments and like Hsieh, did not find changes in consumption.

In contrast, studies of the spending from non-recurring, non-permanent sources of income are fairly rare. Bodkin (1959) estimated the marginal propensity to consume from a one-time dividend paid in 1950 to World War II veterans by the National Service Life Insurance to be between 0.72 and 0.97. Kreinin (1961) analyzed the consumption of a sample of Israeli citizens receiving restitution payments from Germany in 1957 and 1958 and estimated that 35% was spent. Shapiro and Slemrod (1995) found that almost half of the respondents receiving decreased periodic tax withholding refunds in 1992 would spend them, even though the total yearly tax liability remained unchanged, resulting in a lower end-of-year tax refund. However, in 2001, when a tax cut took the form of a lump-sum rebate, only about one-fourth of the respondents surveyed expected to spend the payment (Shapiro and Slemrod, 2003). Chambers and Spencer (2008) found that the timing of payments (whether paid as a lump-sum or spread out in equal monthly installments for a year) was significant, and Sahm, et al. (2012), confirmed that finding.

The framing of payments seems to matter: Baker, et al. (2007) found that more money was spent from likely recurring income (dividends) than from less recurring capital gain income. Hershfield, et al. (2015) found that consumers placed savings and debt into different mental accounts, making them

insensitive to the significant differences between the interest rates on these accounts. Shefrin and Thaler (1988) found that more of a lump sum bonus was saved than if the same amount increased regular income, even when the bonus is fully anticipated.

Windfall source in prior literature include: inheritance (Baker and Nofsinger, 2002; Zagorsky, 2013), bonus (Henderson and Peterson, 1992; Hsieh, 2003), tax rebate (Meekin, et al. 2015; Chambers and Spencer, 2008) and lottery (Winkelmann, et al., 2011).

Is the Source of the Income Important in Mental Accounting?

Some evidence suggests that the source of one's income is important in mental accounting. Winkelmann, et al. (2011) found that spending from different sources of income conferred different marginal utilities. Sources of income may be tied to uses of income. For example, Henderson and Peterson (1992) reported that individuals were more likely to spend \$2,000 on a vacation if the source of the funds was a gift rather than a work bonus. Bradford (2008) found that individuals allocate gifted and inherited assets consistent with their goals in the relationship. Epley, et al. (2006) found that people spent more from an income source of the same amount and timing labeled "bonus" than they did one labeled "rebate."

Milkman and Beshears (2009) found that consumers who received \$10 windfalls in the form of grocery coupons spent an additional \$1.59 on groceries that the consumer did not typically buy. Dobbelsteen and Kooreman (1997) found that when deciding how much to spend on their child's clothing, individuals were more sensitive to changes in a child's allowance than to other income sources. Chambers, et al. (2017) found that people given a hypothetical payment from one of five different sources would spend the funds differently, depending on the source of the money, and that less of the windfall would be saved overall from a game show payment than from a tax rebate. Similarly, Chambers, et al. (2017) found that people's tended not to shift away from their spending habits.

The goal of this paper, given that money is fungible, is to test to see whether the affective tag of the spending significantly mirrors the affective tax of the windfall source.

Affective Tags and Mental Accounting

Levav and McGraw (2009) proposed that windfalls in mental may have a feeling attached to that sum of money, or “affective tag.” They found that when a windfall that is negatively tagged is received, the associated negative feelings influenced respondents to consume the windfall either reluctantly or virtuously to cope with those negative feelings. O'Curry v. Strahilevitz (2001) found that those receiving lotto payments spent it hedonistically. This study focuses on one of those questions: does an income source affectively tagged as “fun” result in significantly more spending on fun? Additionally, as a research question, how is the spending on fun bounded, if at all?

Demographic Factors

Several demographic factors might be significant. Specifically, Chen and Volpe (2002) found that the variable for women was significant when the topic was personal finance, but education and experience can have a significant impact on the financial literacy of both genders. Fisher, et al. (2015) found that income, income uncertainty, wealth, high-risk tolerance, and savings also differed significantly by gender, as did being non-white and having other household members. Fisher (2010) found that certain race differences in savings were explained by the individual determinants of saving, including: receiving government assistance, feeling that credit use is bad, being turned down for credit in the past 5 years, or having a shorter saving horizon; race also significantly affected risk tolerance.

Hypothesis and Research Questions

This study examines whether people spend the same proportion of a distribution on ‘fun’ categories when the windfall source is a fun source, like from a gameshow, as they do when the source is less fun, like from a tax rebate. This study examines the spending from bonuses, which might be a more neutral benchmark, tax rebates and game show winnings. Only windfall earnings will be explored,

as literature indicates that amounts spent from windfall income is spent differently from one's regular income (Arkes, et al., 1994; Karlsson, et al., 1999).

How might the recipient consider these sources as similar or different? Tax systems are run by a government or its appointed agency and are largely outside the respondent's control, whereas bonuses and game show winnings are generally run by private enterprises and may have more elements of respondent's control. To what extent the money is "earned" is debatable, but bonuses and game show winnings require some personal skill, knowledge and effort. Tax rebates sometimes differ from the other sources of payment because the tax rebate is a return of withholdings the taxpayer has previously paid in. That is, outside of refundable credits tied to specific performance, respondents generally cannot materially profit from a tax rebate because it is a rebate of the taxpayer's own money already paid in but can profit from a game show or bonus. Some political rhetoric frames taxes as money belonging fundamentally to taxpayers, not the government, whereas bonuses and game show winnings come with less of an entitlement. Bonuses are likely to be closely tied to an individual's performance, however. Game show winnings might be as well, if the winner attributes success to having a higher skill level than fellow contestants. In addition, collecting a bonus or a tax rebate may be repeatable. One could not count on or control repeating a game show winning.

Additional differences in affective 'euphoria' surround these payments. It is unlikely that there will be a TV commercial asking, "you just got a tax rebate, what are you going to do?" "I'm going to Disney World!" However, winning a game show, or perhaps even earning a bonus may be cause for celebration. If the mental frame of the windfall is celebratory, then perhaps the spending will be directed more toward celebrations and 'fun' than if the windfall was from a tax rebate. Alternatively, if the recipient were looking to brag about or show off their good fortune, they may be more likely to spend it on fun than on regular household expenses. They may allocate more toward an infrequent expense such as a vacation, bigger holiday gifts, or something they have always wanted. Differences in

the amount spent by classification and by source are to be expected, but no source is absolute and completely separate in characteristics from the other sources, biasing against finding any differences.

Basically, our hypothesis is that the more euphoric and hedonistic the source, like game show winnings, the more one would spend on 'fun.' Alternatively, the more 'adult' the source of the windfall, such as a tax rebate, the more one would spend on 'responsible' uses, like household expenses and durable goods, such as a car or washing machine. In testing these hypotheses, the amount of the income in dollars and relative to household income, the amount of the payment, the respondent's habit of spending or saving, the order of presentation, the frequency of payments and the demographic characteristics of the respondents will be controlled for.

With that in mind, the null hypotheses are:

H₁: There will be no difference in spending on "fun" by source of windfall.

H₂: There will be no difference in spending for regular expenses, credit card payments or durable assets ("adult" uses) by source of windfall.

Additionally, if either of these hypotheses produce significant findings, the sensitivity of the spending pattern will be analyzed to answer the research question:

RQ₁: Is the amount spent on fun or adult uses capped at a fixed dollar amount or a relative percentage of the amount received, or does it exhibit another pattern entirely?

This question, we believe, has been previously unexplored in research literature and represents a contribution to the knowledge of the field.

Methodology

In this study, we examine respondents intended uses of hypothetical windfalls. Sheppard, et al.'s (1988) meta-analysis of 86 theory-of-reasoned-action studies found a 0.53 correlation between intention and behavior, indicating that intent is a strong predictor of action.

In this study, the intended spending/saving patterns of respondents were gathered through 80 different instruments. Each participant was given one of these 80 instruments at random and asked how

they would use the funds, both if it were received as a lump-sum and if the same amount were received spread out over 12 equal monthly payments (within-subject design), from two of these five sources: bonus, game show winnings, inheritances, lottery winnings and tax rebates (between-subjects design). The amount of payments on the instrument was one of these four different amounts: \$300, \$600, \$1,500, \$3,000. Some instruments presented the lump-sum amounts first and some presented the periodic amounts first to control for the order effect.

Consistent with Chambers and Spencer (2008), the instruments asked how much of a lump sum rebate would be used for: (1) investing, (2) paying off credit card debt, (3) paying off notes, (4) regular monthly expenses, (5) buying a durable asset, (6) saving for an infrequent expense, and/or (7) used for fun. The instrument also asked how much of a monthly payment, equal to 1/12 of the lump sum amount, would be used for each of these seven purposes. Similarly, the flip side of each instrument asked these same questions, changing only the source of the payment from one source to another – such as from a tax rebate to a game show payment.

Students were considered provisionally acceptable respondents per Walters-York and Curatola (1998) and Ashton and Kramer (1980). As such, instruments were distributed to university students at these institutions: Coastal Carolina University, Francis Marion University, Longwood University, Metropolitan State University of Denver, Texas A & M University - Corpus Christi, University of Alabama – Birmingham, and University of Houston-Clear Lake.

All research questions were analyzed with descriptive statistics, and then was converted to a percent of the total payment received for each of the seven categories: (1) investing, (2) paying off credit card debt, (3) paying off notes, (4) regular monthly expenses, (5) buying a durable asset, (6) saving for an infrequent expense, and (7) used for fun were coded as spending. Because the examples listed in category (6) were “a vacation, bigger holiday gifts, or something you’ve been wanting,” the percentages for items (6) and (7) were added together as were the dependent variable for “Fun spending.” The

independent variables were Log of income, Materiality of payment, Spending default (which is whether the respondent habitually saves or spends unexpected money received), dummy variables for the total amount of payment, and dummy variables for the source of the windfall: game show winnings, bonus or tax rebate. Demographic and other control variables were included to control for order effect, risk-taking variables gender, age, business experience level and education level.

The complete regression model was of the form:

Percent Spent on Fun = F(Income, Zero income, Amount, Education, Gender, Age, Importance, Seatbelt use, Smoker, Spend1, Experience level, dummy variables for the Source of the payment (tax rebate, bonus, or game show), and a dummy for the Order of presentation (monthly payment first, or lump sum payment first)).

“Income” is the log of the respondent’s income plus one. “Amount” is the hypothetical amount of the distribution, in dollars. Rather than use a continuous variable for the total payments, dummy variables were created for the four discrete payment amounts. Education was divided into four categories: high school, associate degree, undergraduate degree, and graduate degree. “Gender” was a categorical male/female variable, where female was coded as “1.” “Age” was the participant’s age in years. “Materiality” measured materiality and was defined to be the total payment divided by the income of the respondent. The “Seatbelt” and “Smoker” dummy variables were included as proxies for respondents’ risk preference; seatbelt wearers and smokers were coded as “1.” The “Spend1” variable is a measure of respondents’ habit of using extra money; the respondents were asked “When you get ‘extra money,’ do you spend it or save it?” For those that answered “spend,” the dummy was set to 1. In testing these hypotheses, the order of presentation and the frequency of payments were also controlled for. Interaction effects were also run as a control measure. Ultimately, the monthly payments were considered immaterial and dropped from the model.

Basic regressions were run matching the two extremes of (un)fun: bonus, game show winnings and tax rebate, but eliminating non-significant control variables except for Income, Importance, Spend 1 and Level of rebate. That model is:

H₁: Percent Spent on Fun = F(Income, Materiality, Spend 1, dummy variables for Amount, and dummy variables for game show and bonus sources).

H₂: Percent Spent on Adult Sources = F(Income, Materiality, Spend 1, dummy variables for Amount, and dummy variables for game show and bonus sources).

Results

There were approximately 1800 returned surveys in total, of which 601 were usable and pertained to the tax rebate, bonus and game show sources of income. Twenty-two of these observations had at least one missing value. The results of the regression are shown in Table 1:

Table 1: Regression of Hedonistic or “Fun” Model Between Game Show and Tax Rebate

Basic Model					
Dependent Variable: Percent Spent on Fun					
Number of Observations Read 407					
Number of Observations Used 391					
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	2.03636	0.29091	3.82	0.0005
Error	383	29.18922	0.07621		
Corrected Total	390	31.22558			
Root MSE		0.27607	R-Square	0.0652	
Dependent Mean		0.28264	Adj R-Square	0.0481	
Coefficient Variable		97.67434			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	0.22191	0.06037	3.68	0.0003
Lnincome	1	0.00778	0.00583	1.33	0.1829
Materiality	1	0.00009549	0.00003720	2.57	0.0106
Spend1	1	0.05509	0.02934	1.88	0.0611

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Level600	1	-0.10282	0.03625	-2.84	0.0048
Level1500	1	-0.09549	0.04242	-2.25	0.0249
Level3000	1	-0.13641	0.04201	-3.25	0.0013
Gameshow Dummy	1	0.06933	0.02839	2.44	0.0151

As shown in Table 1, the results of this regression were highly significant at $p \leq 0.0005$, although the R-squared is 0.0652 and the adjusted R-squared is 0.0481. Likewise, the source of the payment was highly significant at $p \leq 0.0151$ and the coefficient was a positive 0.06933, indicating that respondents spent more on fun when they received the same amount of payment from a fun source than from a less fun source, and rejecting the null hypothesis. Importance, which is the relative size of the total payment or materiality was also significant at $p \leq 0.0106$, however, the coefficient of 0.00009549 is considered quite low. The total amount of the payment for each dummy variable was significant at $p \leq 0.05$, with all coefficients being negative, indicating that higher the payment, the less was spent on fun. Spend1, which was the variable for how respondents normally allocated their money, was marginally significant at $p \leq 0.10$. That is, the first null hypothesis was rejected.

In the combined, three-source regression, shown in Table 2, the amount of the payment continues to be highly significant with a negative coefficient, and the game show source continues to be highly significant and result in higher spending on fun. Comparing payments from bonus and game show also resulted in a significant model overall, but with a much lower adjusted R-squared and no significant difference between sources. When comparing payments from bonus and tax rebates, the regression model was not marginally significant at $p \leq 0.10$, indicating that while bonus was more neutral than either tax rebate or game show sources, it was spent more like a tax rebate than a game show winning.

Table 2: Regression of Hedonistic or “Fun” Model Between Bonus, Game Show and Tax Rebate

Full Model
 Dependent Variable: Percent Spent on Fun
Number of Observations Read 601
Number of Observations Used 579

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	2.17087	0.19735	2.56	0.0037
Error	567	43.78506	0.07722		
Corrected Total	578	45.95592			

Root MSE 0.27789 **R-Square** 0.0472

Dependent Mean 0.27908 **Adj R-Sq** 0.0288

Coefficient Variable 99.57322

Parameter Estimates

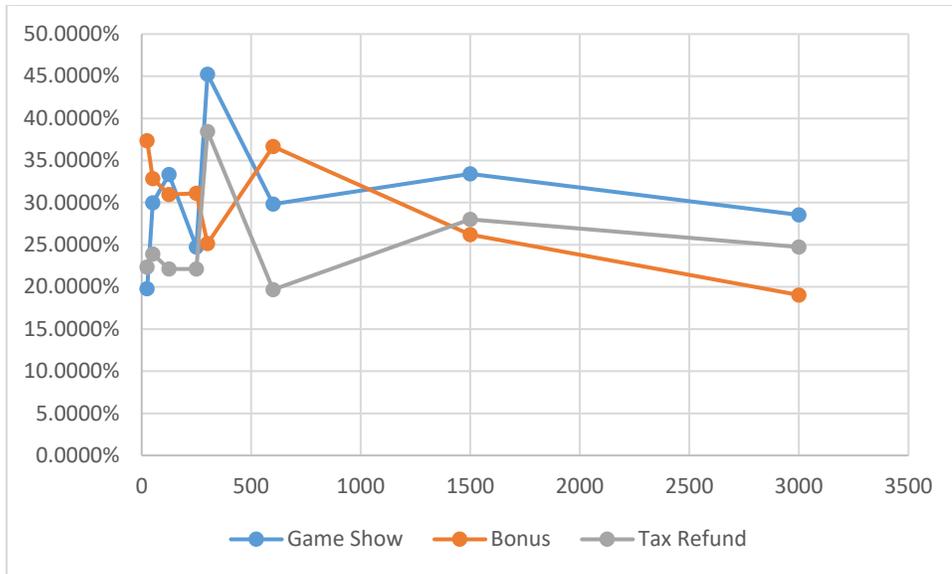
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	0.19572	0.10364	1.89	0.0595
Lnincome	1	0.01442	0.00994	1.45	0.1475
Zeroincome	1	0.16048	0.11328	1.42	0.1571
Gender	1	-0.00790	0.02344	-0.34	0.7361
Age	1	-0.00160	0.00198	-0.81	0.4184
Materiality	1	0.00003087	0.00003302	0.93	0.3503
Spend1	1	0.03850	0.02438	1.58	0.1149
Level600	1	-0.08418	0.03132	-2.69	0.0074
Level1500	1	-0.10977	0.03422	-3.21	0.0014
Level3000	1	-0.11109	0.03463	-3.21	0.0014
Bonus Dummy	1	0.03121	0.02927	1.07	0.2867
Gameshow Dummy	1	0.06296	0.02858	2.20	0.0280

Regressions were also run comparing game show winnings directly with a bonus. We were unable to find a statistically significant difference between the spending on 'fun' when the sources compared were Bonus and Game Show. Similarly, regressions were run comparing tax rebates directly with a bonus. We were unable to find a statistically significant difference between the spending on 'fun' when the sources compared were bonus and tax rebate. Tables for these results are omitted.

Regressions were also run to see if spending on 'adult' uses would differ by the source of the income. We varied the definition of "Adult uses" to mean (1) spending on regular monthly expenses, or (2) the sum of regular monthly expenses and paying off credit cards, or (3) the sum of regular monthly expenses, paying off credit cards, and to buy a durable asset (such as a car, boat, washing machine, or furniture). Regardless of the form of the measure used for "Adult spending," none of these regression models produced results significant enough to reject the second null hypothesis and are not presented as a table. However, regressions were not run against long-term saving, which also would arguably be an adult use of the money.

When looking at the coefficients for each Level in the Game Show/Tax Rebate model, the incremental amount spent appeared to be non-linear. To confirm, we calculated the average percent spent on fun for the monthly amounts of \$25, \$50, \$125, and \$250 and the yearly amounts of spending on fun. Next, we graphed the average percent spent on fun for game show, bonus and tax rebate windfalls. The results, shown in Figure 1, indicate that for small rebates, the percent spent on rebates varied, and varied by source. For larger rebates of \$1,500 and \$3,000, spending on fun leveled out and began to converge at around 30%, regardless of source.

[Figure 1: Percent of Windfall Spent on Fun](#)



Discussion

Overall, this model lends significant support to O'Curry v. Strahilevitz (2001) findings of people placing affective tags on money and expands the body of knowledge that one affective tag is “fun.” Generally, these findings also support Thaler’s (1999) mental accounting theory. However, the size of the effects also supports the neo-classical economic notion money is more fungible than not, and/or people are more rational than not with their money when it comes to fun sources and fun uses.

Regression results presented in Table 2 suggest that survey respondents did not spend the windfall differently if the source was a tax rebate or a work bonus. Additionally, the regressions comparing only windfalls from a bonus and a game show did not show a significant difference between the source. These results seem to indicate that there may be a hierarchy of ‘fun’ sources. Game shows winnings are likely more fun than work, and work is not much different from taxes, but game shows are clearly more fun than taxes.

We found the results of the research question enlightening. We know that respondents have separate mental accounts, or “buckets” (Thaler, 1999). We know those accounts can get full (Chambers, Spencer and Mollick, 2009). This appears to be what’s happening through roughly the \$600 payment

level. As income rises, so does life style, *ceteris paribus*. However, not all uses of income necessarily rise proportionately. For example, if one's income doubled, that person would not necessarily incur twice as much in medical expenses. A similar increase in income might result in more than doubling a household federal income tax bill because federal income tax rates are progressive.

So, how do the allocations for "fun" change with an increase in income? Apparently, at small amounts of affectively tagged windfalls, enough money is spent to fill the current bucket for fun, and then the size of the bucket increases proportionately. The first part of this graph, then, suggests that people can have "enough fun" for their standard of living, confirming Chambers, et al. (2017) that buckets get full. The second part of this graph describes the elasticity of fun as windfalls increase, which is an important contribution to literature, which we believe has not yet tested how the components of allocating income, and in particular fun, shift, if at all, with respondents' increase in income. This leads to several questions for further study. Had windfalls increased further, would the percentage of income allocated to fun stay relatively flat? Do other allocations of income also grow proportionately, or do some level off or even reverse? What are the other affective tags? How does tagging affect income allocations currently, and as the amount of windfall income rises?

Conclusion

Our findings are consistent with the idea that fun sources of income are more likely to be spent on a fun expenditure. Money won on a game show would be spent more on 'fun' than money received from a tax rebate. This provides support for rejecting the first null hypothesis that there will be no difference in spending on "fun" by source of windfall. However, there may be a hierarchy of 'fun' sources: game shows winnings are likely more fun than work, and work is not much different from taxes, but game shows are clearly more fun than taxes.

We were unable to find reject hypothesis 2, there will be no difference in spending for regular household expenses and durable assets by source of windfall. Though various combinations of

“adulting” (spending on adult causes) were used, we were unable to show that more ‘adult’ sources of income are spent on adult spending like paying down a credit card or paying regular household expenses.

Finally, the percent of the windfall spent on fun levels out. People will apparently spend significantly more on fun when a fun windfall is received, but that spending on fun is not limitless. Additionally, as the amount of the total payment increased, the percentage spent on fun appears to level, indicating that at least within this range of payments, there may be such a thing as “enough (spending on) fun.”

References

- Abeler, J., & Marklein, F. (2008). Fungibility, labels, and consumption. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1139870
- Agarwal, S., & Qian, W. (2013). Consumption and debt response to unanticipated income shocks: Evidence from a natural experiment in Singapore. *Unpublished working paper. National University of Singapore.*
- Ariely, D. (2008). *Predictably irrational*. New York: HarperCollins.
- Arkes, H. R., Joyner, C.A., Pezzo, M.V., Nash, J.G., Siegel-Jacobs, K. & Stone, E. (1994). The psychology of windfall gains. *Organizational Behavior and Human Decision Processes*, 59(3), 331–347.
- Ashton, R. H., & Kramer, S. S. (1980). Students as surrogates in behavior accounting research. *Journal of Accounting Research*, 18(1), 1-15.
- Baker, M., Nagel, S. & Wurgler, J. (2007). The effect of dividends on consumption. *Brookings Papers on Economic Activity*, 1(2007), 231-276.
- Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial Services Review*, 11(2), 97-116.
- Benjamin, D. J. (2006). *Psychology, preferences, and markets*. ProQuest Dissertations and Theses, 231-231 Retrieved from: <http://search.proquest.com/docview/305344915?accountid=7084> (305344915).
- Blinder, A. S. (1981). Temporary income taxes and consumer spending. *Journal of Political Economy*, 89(1), 26-53.
- Bodkin, R. (1959). Windfall income and consumption. *The American Economic Review*, 49(4), 602-614.
- Boylan, S. (2010). Prior audits and taxpayer compliance: Experimental evidence on the effect of earned versus endowed income. *Journal of the American Taxation Association*, 32(2), 73-88.
- Bradford, T.W. (2008). Intergenerationally gifted asset dispositions. *Journal of Consumer Research*, 36(1), 93-111.
- Browning, M., & Collado, M.D. (2001). The response of expenditures to anticipated income changes: Panel data estimates. *The American Economic Review*, 91(3), 681-692.
- Camerer, C., Babcock, L., Loewenstein, G. & Thaler, R. (1997). Labor supply of New York City cabdrivers: One day at a time. *Quarterly Journal of Economics*, CXIII (May), 407-442.
- Chambers, V., Bland, E. & Spencer, M. (2017). Does the source of a cash flow affect spending versus saving? *Financial Services Review*, 26(3), 291-313.
- Chambers, V., & Spencer, M. (2008). Does changing the timing of a yearly individual tax refund change the amount spent vs. saved? *Journal of Economic Psychology*, 29(6), 856-862.
- Chambers, V., Spencer, M., & Mollick, J. (2009). Goldilocks rebates: Complying with government wishes only when the rebate amount is “just right.” *Journal of Economics and Economic Research*, 10(1), 101-119.
- Cheema, A., & Soman, D. (2006). Malleable mental accounting: The effect of flexibility on the justification of attractive spending and consumption decisions. *Journal of Consumer Psychology*, 16(1), 33-44.

- Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial Services Review*, 11(3), 289-307. Retrieved May 18, 2017 from <https://manowar.tamucc.edu/login?url=http://search.proquest.com/docview/212012102?accountid=7084>
- Dobbelsteen, S., & Kooreman, P. (1997). Financial management, bargaining and efficiency within the household; an empirical analysis. *De Economist*, 145(3), 345-366.
- Epley, N., Mak, D., & Idson, L. (2006). Bonus or rebate?: The impact of income framing on spending and saving. *Journal of Behavioral Decision Making*, 19(3), 213-227.
- Epley, N., & Gneezy, A. (2007). The framing of financial windfalls and implications for public policy. *The Journal of Socio-Economics*, 36(1), 36-47.
- Fisher, P.J. (2010). Black-White differences in saving behaviors. *Financial Services Review*, 19(1), 1-16.
- Fisher, P.J., Hayhoe, C.R. & Lown, J.M. (2015). Gender differences in saving behaviors among low- to moderate income households. *Financial Services Review*, 24(1), 1-13.
- Frederick, S. (2005). Cognitive reflection and decision making. *The Journal of Economic Perspectives*, 19(4), 25-42.
- Friedman, M. (1957). *A theory of the consumption function*. Princeton: National Bureau of Economic Research.
- Heath, C., & Soll, J.B. (1996). Mental accounting and consumer decisions. *Journal of Consumer Research*, 23(1), 40-52.
- Henderson, P. W., & Peterson, R. A. (1992). Mental accounting and categorization. *Organizational Behavior and Human Decision Processes*, 51(1), 92-117.
- Hershfield, H. E., Sussman, A.B., Rourke, L.O., & Bryan, C. J. (2015). Leveraging psychological insights to encourage the responsible use of consumer debt. *Perspectives on Psychological Science*, 10(6), 749-752.
- Hsieh, C. (2003). "Do consumers react to anticipated income changes? Evidence from the Alaska permanent fund." *The American Economic Review*, 93(1), 397-405.
- Johnson, D. S., Parker, J.A. & Souleles, N. S. (2006). Household expenditure and the income tax rebates of 2001. *American Economic Review*, 96(5(December)), 1589-1610.
- Karlsson, N., Gärling, T., & Selart, M. (1999). Explanations of effects of prior income changes on buying decisions. *Journal of Economic Psychology*, 20(4), 449-463.
- Krein, M. E. (1961). Windfall income and consumption: additional evidences. *The American Economic Review*, 51(3), 388-390.
- Levav, J. & McGraw, P. (2009). Emotional accounting: How feelings about money influence consumer choice. *Journal of Marketing Research*, 46(February), 66-80. accountid=7084
- Meekin, K.E., Tach, L. & Sykes, J. (2015). *It's not like I'm poor: How working families make ends meet in a post-welfare world*. University of California Press.
- Milkman, K. L., & Beshears, J. (2009). Mental accounting and small windfalls: Evidence from an online grocer. *Journal of Economic Behavior & Organization*, 71(2), 384-394. Retrieved from <https://manowar.tamucc.edu/login?url=http://search.proquest.com/docview/230848483?accountid=7084>

- O'Curry, S. (1999). Income source effects. *Unpublished working paper, DePaul University*.
- O'Curry, S, & Strahilevitz, M (2001). Probability and mode of acquisition effects on choices between hedonic and utilitarian options. *Marketing Letters*, 12:1, 37-49.
- Parker, J. (1999). The reaction of household consumption to predictable changes in Social Security taxes. *American Economic Review*, 89(4), 959-973.
- Read, D., Loewenstein, G. & Rabin, M. (1999). Choice bracketing. *Journal of Risk and Uncertainty*, 19, 1-3 and 171-197.
- Rizzo, J. A., & Zeckhauser, R. J. (2003). Reference incomes, loss aversion, and physician behavior. *The Review of Economics and Statistics*, 85(4), 909-922.
- Rucker, M. H. (1984). Allocation of windfall income: a case study of a retroactive pay increase to university employees. *The Journal of Consumer Affairs*, 18(1), 101-118.
- Sahm, C. R., Shapiro, M. D. & Slemrod, J. (2012). Check in the mail or more in the paycheck: Does the effectiveness of fiscal stimulus depend on how it is delivered? *American Economic Journal-Economic Policy*, 4(3), 216-250.
- Shapiro, M. D., & Slemrod, J. (1995). Consumer response to the timing of income: Evidence from a change in tax withholding. *American Economic Review*, 85(1), 274-283.
- Shapiro, M. D., & Slemrod, J. (2003). Did the 2001 tax rebate stimulate spending? Evidence from taxpayer surveys. In J. M. Poterba (Ed.), *Tax policy and the economy*, (p. 17). Cambridge, MA: *National Bureau of Economic Research and MIT Press*, 83-109.
- Shefrin, H. M., & Thaler, R. H. (1988). The behavioral life-cycle hypothesis. *Economic Inquiry*, 26 (October), 609-643.
- Sheppard, B., Hartwick, J., & Warshaw, P. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15(3), 325-343.
- Souleles, N. S. (2002). Consumer response to the Reagan tax cuts. *Journal of Public Economics*, 85(1), 99-120.
- Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral Decision Making*, 12(3), 183-206.
- Trump, R. K., Finkelstein, S. R. & Connell, P. M. (2015). I will risk a stranger's money, but not my own or my friend's money: Effect of proximity of the money source to the self on financial risk-taking. *Marketing Letters*, 26(4), 501-512.
- Walters-York, L. M., & Curatola, A. P. (1998). Recent evidence on the use of students as surrogates subjects. *Advances in Accounting Behavioral Research*, 1(1998), 123-143.
- Wertenbroch, K. (2001). Self-rationing: Self-control in consumer choice.
- Winkelmann, R., Oswald, A.J., & Powdthavee, N. (2011, August). What happens to people after winning the lottery? In *European Economic Association & Econometric Society Parallel Meetings* (pp. 25-29).
- Zagorsky, J. L. (2013). Do people save or spend their inheritances? Understanding what happens to inherited wealth. *Journal of Family Economic Issues*, 34(1), 64-76.

APPENDIX: SAMPLE SURVEY INSTRUMENT

"What would you do if . . .?" (Fill in the amounts): By participating in a game show, you won a prize that would result in *you* receiving \$600.00 for 2012.

If received, how much of these winnings would you plan to:

- | | |
|--|----|
| 1. Invest (in stocks, bonds, savings account, etc.)? | \$ |
| 2. Use to pay off credit card debt? | \$ |
| 3. Use to pay off notes (such as mortgage, car note, etc.)? | \$ |
| 4. Use up about evenly every month for expenses? _____/mo. x 12 mo.= | \$ |
| 5. Use to buy a durable asset (such as car, boat, washing machine, furniture)? | \$ |
| 6. Use to save for an infrequent expense (such as a vacation, bigger holiday gifts, or something you've been wanting)? | \$ |
| 7. Spend right away on something fun? | \$ |

Amount must total \$600.00----->

If instead, by participating in a game show, you won a prize that would result in *you* receiving \$50.00/month for the next 12 months.

If received, how much of this monthly increase would you plan to:

- | | |
|--|----|
| 8. Invest (in stocks, bonds, savings account, etc.)? | \$ |
| 9. Use to pay off credit card debt? | \$ |
| 10. Use to pay off notes (such as mortgage, car note, etc.)? | \$ |
| 11. Use up for regular monthly expenses? | \$ |
| 12. Use to buy a durable asset (such as car, boat, washing machine, furniture)? | \$ |
| 13. Use to save for an infrequent yearly expense (such as a vacation, bigger holiday gifts, and/or something you've been wanting)? | \$ |
| 14. Spend right away on something fun? | \$ |

Amount must total \$50.00----->

<p>Please list your: Zip Code _____ Years of work experience _____</p> <p>Highest education level: High School ___ Associate Degree ___ Undergraduate ___ Graduate or above ___</p> <p>Occupation: _____ Gender: Female ___ Male ___ Age _____</p> <p>Race/ethnicity _____ # of College-level Accounting classes completed ___ College major (if applicable) _____</p> <p>Industry where you work _____</p> <p>Approx. yearly Household income (from all wage and salary earners and other sources of income) \$ _____</p> <p>Credit Card Debt: \$ _____ Other Debt: \$ _____</p> <p>Do you smoke? Do you normally wear your seatbelt? Yes ___ No ___</p> <p>When you normally get "extra money," do you spend it or save it? Spend ___ Save ___</p> <p>I rate my level of business experience as:</p> <p>High ___ Fairly High ___ Moderate ___ Fairly Low ___ Low ___ None ___</p>
--

**Complete other side, please.
THANK YOU FOR YOUR PARTICIPATION!!!**

"What would you do if . . .?" (Fill in the amounts): You got a bonus at work that would result in *you* receiving \$600.00 which for 2012 will automatically be mailed to you as a check from your employer.

If enacted, how much of this monthly increase would you plan to:

- | | |
|---|----|
| 15. Invest (in stocks, bonds, savings account, etc.)? | \$ |
| 16. Use to pay off credit card debt? | \$ |
| 17. Use to pay off notes (such as mortgage, car note, etc.)? | \$ |
| 18. Use up about evenly every month for expenses? _____/mo. x 12 mo.= | \$ |
| 19. Use to buy a durable asset (such as car, boat, washing machine, furniture)? | \$ |
| 20. Use to save for an infrequent expense (such as a vacation, bigger holiday gifts, or something you've been wanting)? | \$ |
| 21. Spend right away on something fun? | \$ |

Amount must total \$600.00-----> _____

Another work bonus would result in *you* receiving \$50.00/month after taxes; that is, your paychecks would go up \$50.00/month.

If received, how much of this monthly increase would you plan to:

- | | |
|--|----|
| 22. Invest (in stocks, bonds, savings account, etc.)? | \$ |
| 23. Use to pay off credit card debt? | \$ |
| 24. Use to pay off notes (such as mortgage, car note, etc.)? | \$ |
| 25. Use up for regular monthly expenses? | \$ |
| 26. Use to buy a durable asset (such as car, boat, washing machine, furniture)? | \$ |
| 27. Use to save for an infrequent yearly expense (such as a vacation, bigger holiday gifts, and/or something you've been wanting)? | \$ |
| 28. Spend right away on something fun? | \$ |

Amount must total \$50.00-----> _____

THANK YOU FOR YOUR PARTICIPATION!!!