

The Effect of Windfall Gains on Consumer Purchasing Behavior

Hwan Ho Ha*
(*Gallup Korea*)

Jung Suk Hyun**
(*Cheju National University*)

Jae H. Pae***
(*Hong Kong Polytechnic University*)

(May 2004)

* Hwan Ho Ha is Senior Researcher, Galup Korea
Tel: 82-2-3702-2520, Fax: 82-2-3702-2540, E-Mail: hhha@gallup.co.kr

** Jung Suk Hyun is Assistant Professor of Department of Management Information System and Senior Researcher of Institute of Tourism, Business and Economics, Cheju National University, Jeju, Korea.
Tel: 82-64-754-3184, Fax: 82-64-756-3137, E-mail: jshyun@cheju.ac.kr

***Jae H. Pae is Assistant Professor of Department of Management & Marketing, Hong Kong Polytechnic University, Kowloon, Hong Kong.
Tel: 852-2766-7952, Fax: 852-2765-0611, E-mail: msjpae@polyu.edu.hk

Please send all correspondence to:

Jung Suk Hyun
Assistant Professor
Department of Management Information System
Cheju National University
Jeju, Korea
(Tel) 82-64-754-3184
(Fax) 82-64-756-3137
(E-Mail) jshyun@cheju.ac.kr

The Effect of Windfall Gains on Consumer Purchasing Behavior

Abstract

Based on the mental accounting theory, this study examines consumer's purchasing behavior on unexpected profits/losses. When consumers receive discounts on only one of the two items in a multi-item purchasing situation, they tend to spend more on the discounted item than that of not discounted. However, no statistically meaningful differences have been discerned. In sum, the key element of differences in consumer's purchasing behavior regarding expected profits/losses and unexpected profits/losses depend on the existence or absence of predictions. The decision-making of consumers, therefore, is context and frame-dependent.

Keywords: Mental accounting theory, Unexpected profits/losses, Purchasing behavior

I. Introduction

One of the most frequently employed repertoires in the sales promotion activities of retailers is the provision of "special discounts" and "guaranteed-to-win coupons." Such promotions, which take place within a store in an unannounced and unpredicted manner at the point when the consumer is making a purchase, allows consumers to experience an unexpected profit (windfall gains) arising from unexpected discounts on the items that they had planned to purchase before visiting the store. When the amount of their expenditure is reduced through these unexpected discounts, consumers have a tendency to spend the discounted amount more easily than they would have spent discounts received through an active search such as through comparative shopping. In addition, consumers tend to spend the amount saved through unexpected discounts right there in the store, instead of saving it. In other words, consumers exhibit a type of consumption behavior in which they spend the amount saved on purchasing items that are more high-end than planned or entirely unplanned and additional (Hodge and Mason 1995; Thaler 1999; Soman and Cheema 2001). That is, they upgrade the initial purchase, spend more on a previously planned subsequent purchase, or purchase something else in the store.

Consequently, it is important for retailers to understand how consumers spend the profits gained from unexpected discounts on items that they planned to purchase. If they can understand the behavior and psychological responses of consumers, retailers will have useful guidelines for decisions on pricing and promotions, such as price decreases (price increases) and special discounts (the provision of coupons) (Diamond 1992; Thaler 1999; Meyer et al. 2002).

This study will focus on explaining the process through which the purchase decisions of consumers, topical and context-dependent, are framed by adopting the concept of topical accounts from the mental accounting theory and an unexpected (expected) discount scenario, along with the spending behavior of consumers when purchasing a variety of items at the same time. In addition, by using the scenario of an unexpected (expected) price increase, differences in their spending behavior and in the process of mental accounting that they engage in will be examined with respect to whether the price increase was predicted. Finally, the strategic implications of the findings for retailers such as department stores and discount stores will be discussed.

II. Research Hypotheses

According to the theory of mental accounting, if purchasers have established reference prices before shopping, they in fact have already assigned the same amount to expenditure accounts. Shefrin and Thaler (1988) and Thaler (1990) postulated that household economy executes a psychological effect on calculation, whereby income is allotted to future income accounts, asset accounts, and current income accounts. They also suggested that the MPC (marginal propensity to consume) of future income accounts is close to 0, which of asset accounts is between 0 and 1, and that of current income accounts is close to 1. In addition, Thaler (1990) saw unexpected profit as a part of current income and suggested that both are spent before the funds in future income accounts or asset accounts.

Hodge and Mason (1995) and Meyer et al. (2002) stated that, when they save unexpectedly on planned purchases (e.g., by receiving unexpected discounts), purchasers end up consuming all of the funds in expenditure accounts by leaving a small amount of money in these accounts and purchasing either more expensive items or additional items. On the contrary, when they expect to save money (e.g., by receiving discounts through an active search for information or through comparison shopping on the basis of an anticipation of discounts), consumers easily lower their reference prices, which have not been firmly established beforehand, while shopping at many different stores.

As Kahneman and Tversky (1984) and Thaler (1985, 1999) claimed, most mental accounting is topical and context-dependent and the reference state is determined by these purchase contexts. It is therefore possible to establish the following hypothesis:

Hypothesis 1: Consumers will have more of a tendency to spend the profits gained from discounts right in the store when such discounts are unexpected.

Kahneman and Tversky (1984) and Bonini and Rumiati (1996) have proposed that, in a calculator-purchasing scenario (a purchase decision in a situation where consumers will purchase a \$125 jacket and a \$15 calculator, with the same calculator sold at a \$5 discount in a different store nearby), monetary profits are framed as minimal accounts (where the calculation of profit/loss depends solely on differences in price), topical accounts (where calculations are made with respect to the context of decision-making), and comprehensive accounts (where calculations also takes into consideration the purchase of other products and budget constraints).

Despite such findings in existing studies, however, Hodge and Mason (1995) have only discovered that the mental accounting process affects the spending behavior of consumers. In other words, they have failed to investigate the claim made by Tversky and Kahneman (1981) and Kahneman and Tversky (1984) that consumers voluntarily make consumption decisions through topical accounts; and the finding of Shefrin and Thaler (1988) that a specific amount included in one psychological account will not be included in another psychological account.

In sum, the concept of topical accounts mentioned above shows that consumers, in purchasing products, tend to purchase various items at the same time instead of a single item, and exhibit loss-avoiding behavior through which they attempt to combine their losses. It is therefore possible to apply the concept of topical accounts from the theory of mental accounting and establish the following hypothesis:

Hypothesis 2: In a situation where they intend to purchase two different items and gain a

profit from unexpected discounts on only one item, consumers will have a tendency to use this profit to purchase a more expensive product in the discounted item instead of purchasing a more expensive product in the item that has not been discounted.

III. Study Methods

1. Design of the Experiment

1.1 Selection of the Products and Samples for the Experiment

To select the products to be used in the hypothetical scenario and the experiment, this study conducted an investigation involving university students. First, through focus group interviews, electronic organizers and portable audio players were selected as the products to be experimented upon. These interviews were conducted to determine the students' interest in four products—sneakers, jeans, electronic organizers, and portable audio players—as well as their knowledge of the actual prices of these products and what they thought were appropriate rates of discount.

University student were selected to be the participants in this study because they are comparatively familiar with electronic organizers and portable audio players. The sample group consisted of 240 students in a foundational course in business administration at a university in Seoul. This sample group was in turn divided into two subgroups depending on whether the price increase was expected or unexpected. The amount of relative expenditure according to the change in price in each situation was examined through experiments conducted on each group.

1.2 Design of the Experiment

As the independent variables for this study, expected discounts and unexpected discounts were selected. For the experiment, the purchase situation per product was classified into four groups for conditions of discount and increase, as shown in Table 1. Here, in a situation where consumers plan to purchase both portable audio players and electronic organizers, a discount is to be received on the item purchased first.

Table 1. Experimental design regarding consumer predictions of a discount

Purchase Order	Portable Audio Player/ Electronic Organizer	Electronic Organizer/ Portable Audio Player
Discount Method		
Expected discount	Portable audio player	Electronic organizer
Unexpected discount	Portable audio player	Electronic organizer

Expected discounts and unexpected discounts of portable audio players and electronic organizers, the two categories of products used in these experiments, were provided to participants through a hypothetical scenario. For instance, the participants were presented with a scenario in which Alex, a hypothetical figure, visited an electronics store to purchase planned products: a portable audio player and an electronic organizer. They were then asked to respond to a survey from Alex's perspective. In this study, the experiments were conducted within groups according to the order in which the products were purchased in a situation of expected discounts and unexpected discounts. The number of participants per experiment group was limited to thirty.

1.3 Procedures in the Experiment

First, each participant was provided with an explanation of the purpose of this study and

was asked to follow the procedures of the survey. Since there are no correct or incorrect answers, they were asked to respond frankly. In addition, the importance of this study in contributing to an understanding of the purchase behavior of consumers was explained to the participants to encourage them to spend care and effort in responding to the survey.

After the experimental situation had been established, the participants were provided with four different surveys regarding expected and unexpected discounts. Finally, they were asked to read the scenario and the advertisement carefully for three minutes, and then to suppose that they were Alex and to respond to questions in the survey concerning methods of expenditure, reference prices, and the similarity between their judgments and those of other participants. Following the experiments, the participants were provided with a brief explanation of the purpose of this study and small tokens of gratitude.

2. Manipulations and Measurement of Variables

2.1 Manipulation of Independent Variables

First, under conditions of discount, an expected situation of discount was established as a situation in which purchasers, dissatisfied with the prices at the store concerned, make conscious efforts to save money. As for an unexpected situation of discount, savings were neither planned nor expected and there was no manipulation of the situation so that the participants would make conscious efforts to save money.

Table 2. Discount methods and products assigned to each discount scenario

Product Discount Method	Portable Audio Player/ Electronic Organizer/ Electronic Organizer	Portable Audio Player
Expected discount		
Left unused	_____ won	_____ won
First purchased item upgraded	_____ won	_____ won
Second purchased item upgraded	_____ won	_____ won
Different product in the store purchased	_____ won	_____ won
Unexpected discount		
Left unused	_____ won	_____ won
First purchased item upgraded	_____ won	_____ won
Second purchased item upgraded	_____ won	_____ won
Different product in the store purchased	_____ won	_____ won
Savings through discounts	50,000 won	50,000 won

IV. Analysis

Hypothesis 1 presupposed that the participants, in planning purchases, would have a greater tendency to spend at the store the profits gained from unexpected discounts than profits gained from expected discounts. To analyze Hypothesis 1, this study conducted an analysis of average differences in value, with unexpected discounts and expected discounts as independent variables and the money set aside for future uses as the dependent variable.

First, Table 3 presents the differences in the responses of the groups of participants regarding expenditure. As is clear from the table, the participants tended to set aside an average of 8,375 won (portable audio players) and an average of 16,929 won (electronic organizers) for other future uses in the case of unexpected discounts rather than expected

discounts. In other words, the savings of 50,000 won tended to be spent more at the store concerned when the discounts had been unexpected rather than expected (portable audio players: 41,625 won; electronic organizers: 33,075 won).

Table 3. Average expenditure among groups according to discount method (unit: won)

Discount Method	Discounted Product	Left Unused	Spent on the First Purchase	Spent on the Second Purchase	Spent on Other Products
Expected Discount (1)	Portable Audio Player	21,375	14,063	11,406	625
Expected Discount (1)	Electronic Organizer	28,000	3,667	15,000	3,333
Unexpected Discount (2)	Portable Audio Player	13,000	20,333	13,667	3,000
Unexpected Discount (2)	Electronic Organizer	11,071	10,179	24,821	3,929
	(1) - (2)	8,375 16,929	-6,270 -6,512	-2,261 -9,821	-2,375 -596
Total Average (50,000 won)		18,533	12,125	16,000	2,667

As is apparent from the results of multi-way ANOVA (analysis of variance) in Table 4, the participants saw expected discounts and unexpected discounts differently in the case of both portable audio players and electronic organizers ($p < 0.05$). Judging from such results, it is possible to say that Hypothesis 1 has been supported.

Table 4. Multi-way ANOVA of differences among groups according to discount method

Product	Variance Source	Sum of Squares (SS)	d.f.	Mean Square	F-Value	p
Portable Audio Player	Discount Method	1086.05	1	1086.04	4.44	0.039
Portable Audio Player	Residual	14675.50	60	244.59		
Portable Audio Player	Total	15761.55	61			
Electronic Organizer	Discount Method	4150.42	1	4150.42	19.21	0.000
Electronic Organizer	Residual	12097.86	56	216.03		
Electronic Organizer	Total	16248.28	57			

Hypothesis 2 presupposed that, when they were purchasing two planned items at the same time and received an unexpected discount on only one of the items, purchasers would tend to spend the profit gained from unexpected discounts on the discounted item rather than on the item that is not discounted. To determine such facts through statistical analysis, a *t*-test was conducted between the two variables.

As can be seen in Table 5, when purchasing portable audio players and electronic organizers together at the same time in a situation of unexpected discount, the participants tended to spend the profit of 50,000 won gained from discounts on portable audio players in the following manner: an average of 19,063 won on the purchase of a portable audio player;

and an average of 12,818 won on the purchase of an electronic organizer. Seen in this way, the participants spent an average of 6,245 won more on purchasing a portable audio player than on purchasing an electronic organizer.

Table 5. Result of *t*-test of differences in expenditure

Savings Method	Discounted Product	Payment Method	Average	Standard Deviation	d.f.	<i>t</i> -Value	<i>p</i>
Expected Discount	Portable Audio Player	First Item	14,063	16,917	31	0.61	0.547
Expected Discount	Portable Audio Player	Second Item	11,406	13,926	31	0.61	0.547
Expected Discount	Electronic Organizer	First Item	3,667	6,814	29	-3.80	0.001
Expected Discount	Electronic Organizer	Second Item	15,000	14,739	29	-3.80	0.001
Unexpected Discount	Portable Audio Player	First Item	19,063	14,449	31	1.40	0.171
Unexpected Discount	Portable Audio Player	Second Item	12,818	15,077	31	1.40	0.171
Unexpected Discount	Electronic Organizer	First Item	9,194	14,782	30	-2.53	0.017
Unexpected Discount	Electronic Organizer	Second Item	22,419	19,953	30	-2.53	0.017

However, the profit of 50,000 won gained from the discount on the electronic organizer tended to be spent a portable audio player (average: 22,419 won) rather than on an electronic organizer (average: 9,194 won). In the case of the portable audio player, it was clear that consumers spent the savings from discounts on items purchased first rather than those purchased later. The same did not hold, however, for electronic organizers.

When such average differences were examined through statistical analysis, electronic organizers yielded results that were exactly opposite from Hypothesis 2. This demonstrates that, regardless of whether the discounts are expected or unexpected, consumers tended to spend the discounted amount on electronic organizers than on portable audio players. Statistically, the results were very meaningful for both expected and unexpected discounts ($p < 0.05$).

On the contrary, in the case of portable audio players, Hypothesis 2 tended to be supported, as the participants tended to spend the profits gained from discounts on portable audio players on the purchase of the portable audio players itself. However, although the difference was greater for unexpected discounts than for expected discounts, it was not statistically meaningful ($p < 0.1$). Seen thus, Hypothesis 2 must be seen as having been supported only in part.

V. Discussion

An analysis of Hypothesis 1 reveals that consumers have a greater tendency to spend the profits gained from unexpected discounts than from expected discounts. Hypothesis 1 confirms the following results.

First, unexpected profit is consumed more easily than is expected profit. Second, a key feature of unexpected profit lies in a “lack of anticipation.” This in fact is a violation of the most basic economic presupposition of fungibility, where “all forms of wealth must have the

same pattern of consumption,” and agrees with the results of a study conducted by Hodge and Mason (1995). In addition, as has been claimed in the mental accounting theory of Thaler (1985, 1999), Tversky and Kahneman (1981), Kahneman and Tversky (1984), Thaler and Johnson (1990), and Soman and Cheema (2001), purchasers establish reference prices and assign equivalent amounts to expenditure accounts before shopping.

On the other hand, it is clear that, when they gain a profit from an unexpected discount, purchasers allot only a small portion of this profit to expenditure accounts for other future uses and spend the rest on planned items. Why, then, do unexpected profits exhibit a relatively high MPC?

An analysis of Hypothesis 2 yielded the following result, at least in part: in a situation where they are to purchase two different products at the same time and receive discounts on the product purchased first, consumers tend to spend the unexpected profit thus gained on the product purchased first rather than on the product that is purchased later. As Tversky and Kahneman (1981), Kahneman and Tversky (1984), and Thaler (1985, 1999) have proposed, this supports the fact that consumers voluntarily frame consumption decision-making as topical accounts. In addition, this goes against the claims of Shefrin and Thaler (1988) that a specific amount of money included in one psychological account is not included in another psychological account.

Although statistically meaningful, the case of portable audio players confirmed, at least in part, the fact that consumers voluntarily establish topical accounts in executing psychological calculations. Such differences in the results concerning portable audio players and electronic organizers seem to occur because consumers establish accounts by product groups such as clothing, home appliances, and food rather than by specific products. In addition, when consumers purchase related products, each product has a unique importance and priority. In this study, these differences seem to stem from the fact that the participants considered portable audio players to be more important than electronic organizers.

An analysis of the formation of reference prices revealed that, for the participants, the reference price of portable audio players amounted to an average of 159,000 won and that of electronic organizers amounted to an average of 153,000 won, with the former exceeding the latter by 6,000 won—which supports the results. Future studies therefore must examine the effect of related products and unrelated products. In particular, in the case of related products, the effect of bundle products must also be taken into consideration.

VI. Conclusion

Using the theory of mental accounting, this study has examined the effect of differences in spending behavior between unexpected profit (loss) and expected profit (loss) and the mental accounting process on the establishment of expenditure accounts. The results are as follows.

As in the study conducted by Hodge and Mason (1995), it was found that consumers differentiate between profits gained from expected discounts and those from unexpected discounts. They seem to assign a different subjective value to each type of profit and, in particular, tend to establish different accounts depending on the source of a particular profit. When purchasing two different products at the same time in a situation of planned purchase, consumers assign profits from unexpected discounts to current spending accounts, consuming them immediately.

When they receive discounts on only one of the two items that they are purchasing at the same time, consumers tend to spend more on the purchase of the discounted item than on the item that has not been discounted. However, no statistically meaningful differences have been

discerned. In addition, consumers more actively make planned purchases when they are informed of price increases before their arrival at the store concerned, rather than afterwards. In sum, the key element of differences in consumers' spending behavior regarding expected profits/losses and unexpected profits/losses is the existence or absence of predictions. The decision-making of consumers, therefore, is context and frame-dependent.

There are some implications for this study. First, this study has focused on the spending behavior of people whom, with relatively small amounts of unexpected profit, must daily make decisions on consumption, a group largely overlooked in existing studies. Existing studies have concentrated on questions such as "What are the characteristics of unexpected profit?" and "Why is unexpected profit spent more easily than are other forms of profit?" in relation to differences in the MPC of various types of income. This study, however, has examined why and how unexpected profit affects the spending behavior of consumers and how their patterns of expenditure differ when purchasing two different items at the same time, by presupposing small amounts of unexpected profit that consumers could encounter in actual purchase situations. Through such an examination, it has discovered that, as Hodge and Mason (1995) and Meyer, et al. (2002) have suggested, consumers respond sensitively even to relatively small amounts of unexpected profit at the time of purchase. Herein may lay the significance of this study.

Second, existing studies only explain the initial stage, where the spending behavior of consumers differs according to whether discounts have been expected in planned purchases and the mental accounting process affects such spending behavior on the part of consumers. This study, on the other hand, has investigated concretely and in detail the mental accounting process, which is context-dependent and voluntarily framed as a topical account. In particular, it has applied the concept of topical accounts proposed by Tversky and Kahneman (1981), Kahneman and Tversky (1984), and Thaler (1995, 1999) to examine how consumers voluntarily frame consumption decision-making as a topical account.

Third, the spending behavior of consumers can differ according to whether they know of the price increases before or after their visit to a store. This study has discovered that whether a price increase is predicted affects spending behavior just as do discounts, a point that has been neglected in existing studies.

REFERENCES

- Bonini, Nicolao and Rino Rumiati (1996), "Mental Accounting and Acceptance of a Price Discount," *Acta Psychologica*, 93, 149-160.
- Diamond, William D. (1992), "Just What is a Dollar's Worth? Consumer Reactions to Price Discounts vs. Extra Product Promotions," *Journal of Retailing*, 68(3), 254-271.
- Hodge, Sharon K. and Charlotte H. Mason (1995), "Work Versus Windfall: An Exploration of Saving on subsequent Purchase," *Marketing Letters*, 6(2), 91-100.
- Kahneman, Daniel and Amos Tversky (1984), "Choice, Values, and Frames," *American Psychologist*, 39(April), 341.
- Meyer, R. J., N. Janakiraman and A. Morales (2002), The Mental Accounting of Price Shocks: The Effect of Unexpected Price Changes on Cross-Category Purchase Patterns," *Working Paper*, University of Pennsylvania.
- Shefrin, H. M. and R. H., Thaler (1988), "The Behavioral Life-Cycle Hypothesis," *Economic*

Inquiry, 26, 609-643.

Soman, D and Cheema (2001), "The Effect of Windfall Gains on the Sunk Cost Effect," *Marketing Letters*, 12(1), 51-62.

Thaler, Richard H. (1985), "Mental Accounting and Choice," *Marketing Science*, 4 (Summer), 199-214.

_____ (1990), "Saving, Fungibility, and Mental Accounts," *Journal of Economic Perspectives*, 4, 193-205.

_____ – and Eric J. Johnson (1990), "Gambling With The House Money and Trying to Break Even: The Effects of Prior Outcomes on Risky Choice," *Management Science*, 36(6), 643-660.

_____ (1999), "Mental Accounting Matters," *Journal of Behavioral Decision Making*, 12(3), 183-206.

Tversky, Amos and Daniel Kahneman (1981), "The Framing of Decisions and Psychology of Choice," *Science*, 22(January), 453-458.