# The Effect of Denomination on Purchase Decision Making: Focusing on the Construal Level Theory* 

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Price information is important for consumers when they make a purchase decision and it has twofold roles. One role is 'cost' in the process of payment and the other is 'quality signal' as a result of a payment. Depending on how much consumers focus on the price role of 'cost' their perception on monetary sacrifice as well as purchase decision making will change. To understand consumer's point of view to the role of price, we focused on the money consumers' hand which is closely related to payment. Especially we suggest that the denominations of money one possesses can influence perceived monetary sacrifice and attitude toward a product, based on previous research on a category and construal level. To be specific, a large denomination triggers relatively abstract representation similar to a function of broad category, which makes consumers focus more on the role of price as a quality signal rather than the other role of price as a cost. On the other hand a small denomination triggers relatively concrete representation similar to a function of narrow category, which makes consumers focus more on the role of price as cost. To test our assumption we conducted 2 main studies. In study 1 we demonstrated that participants perceived less monetary sacrifice when they owned the same amount of money in a large denomination(10,000 bill) than in a small denomination( 10 of 1,000 bills). In addition, we examined this denomination effect on participants' attitude toward product in study 2. The result reveals that participants who owned money in a large denomination( $W 10,000$ bill) showed more positive attitude toward a target product than who owned money in a small denomination(10 of \#1,000 bills). Furthermore, we certified that this phenomenon is mediated by a representation which is induced by a denomination (study 2). Our research shows the importance of considering the factor related to consumers' monetary possession, especially the denomination of money consumers are having at the moment of payment to understand the consumer's purchase decision making.

Key words : denomination, construal level, mental representation. decision making

[^0]When a consumer makes a purchase decision, price information plays an important role because of its concreteness (Park \& Gwack, 2003). Price not only means one's cost which is closely related to the payment process, but also signals product quality as the result of a payment. And both of these roles can influence consumer's purchase decision making (Monroe, 1973; Kardes, Posavac \& Cronely, 2004). On the premise of these two roles of price, the way how consumers interpret price information is a determinant factor in the decision making process. To be specific, considering price as a monetary sacrifice can determine consumer's purchasing decision because people are basically sensitive to losing something (Khaneman \& Tversky, 1979).

Then, what determines the consumer's interpretation on price cue? According to previous research, various factors such as being exposed to framing of price cue and temporal distance between payment and consumption, which are strategically given by marketers can influence the way consumers interpret price cue (Bornemann \& Homburg, 2011). However, to understand the consumer's purchasing decision process, we should consider the factor owned by consumers themselves, as well as given by marketers. Especially consumer's monetary status is an important factor, because it can differentiate the way how consumers are thinking.

Consumer's interpretation about price cue is
closely connected with the money consumer has because 'purchasing' occurs when a consumer take one's money in a pocket out. Also, especially price as monetary sacrifice has closer relationship with the money consumer has because the consumer feels sacrificed when one paying the bill. For instance, even if the price of product is same consumer feels it is less expensive when one has lots of money in one's pocket than a little money (Sharma \& Alter, 2012). Like this, the money in the pocket is an important factor to understand how a consumer views price information and even if the total sum of money is same, composition of money can change the way how consumer interpret price cue.

According to the previous research about a denomination, consumers' way of thinking changes when they are exposed to a different denomination of money, although the amount of money was same among the groups allocated different denomination (Ahn, Kim, \& Park, 2008; Mishra, Mishra, \& Nayakankuppam, 2006). We assume that this kind of change can influence the way consumers view the price of a product, based on research about category and construal level (Lembregts \& Pandelaere, 2013; Ülkümen, Chakravarti, \& Morwits, 2010; Trope, Liberman \& Wakslak, 2007). Since different denomination of money can work as a different category cue, consumer's construal of price information can change. To be specific, large denomination of money works as a broad
category cue, so that consumer views price information in abstract construal level. In contrast, small denomination of money works as a narrow category cue, so that consumer views a price cue in concrete construal level. To summarize, main objective of this article is to investigate the denomination effect which functions as a category. Denomination of money influence consumer's interpretation about price information. These findings can contribute to understanding of the consumer's purchase decision as a whole.

## THEORETICAL BACKGROUND

Role of price and consumers' purchase decision making

Price has twofold role for consumer. This is why price has been one of the dominant study areas in consumer study. According to a traditional economic theory, price is an indicator of monetary expense or cost which is closely related to the consumer purchasing process (Erickson \& Johansson, 1985). However, depart from economic perspective the other meaning of price can be formed through consumers, consumption experience (Kardes, Posavac \& Cronely, 2004). To be specific, consumers consider the price as an indicator of product quality, because they could have usually gained higher product quality when they pay more
(Deval, Mantel, Kardes, \& Posavac, 2013). Taken together, when consumers buy something, the price of product not only indicates cost they need to pay in the purchasing process, but also signals a product quality as a final result of purchasing (Yan \& Sengupta, 2011).

Although price can be perceived as an indicator of both costs and product quality, one aspect can be superior to the other in certain circumstances, because the price perception is not an absolute concept but a relative one (Cronley, Posavac, Meyers, Kardes \& Lellaris, 2005). And if price as a 'cost' is dominantly perceived compared to price as a 'quality signal', consumers' perceived monetary sacrifice for product can be increased, which makes consumers hesitate to purchase the product. Therefore how much attention is paid to the 'cost' aspect of price is a key to understand consumer's purchase decision.

Throughout numerous studies, it was proven that perceived monetary sacrifice, which importantly determines consumer's purchase decision, can be influenced by various factors. One example is a temporal distance from the point of purchase (Yan \& Sengupta, 2011; Bornemann \& Homburg, 2011). When payment is distant from now, consumers'perception of monetary sacrifice decreased, because consumers focus more on the product that they can get immediately than the cost they have to pay in the future. Another example is partition of payment (Gourvile, 1998). According to

PAD (pennies a day), if a big payment is divided into small payment units, the money needed to be paid can be considered as petty cash and people think their monetary sacrifice is low.

In addition to those factors created by marketers, the factor owned by consumers themselves should be importantly considered. Especially consumers' monetary status can influence their perceived monetary sacrifice, thus we should shed light on how much or what consumers have. For instance, it is easier for consumers with financial deprivation to feel product expensiveness than the rich (Sharma \& Alter, 2012). Along with the amount of money consumer has, in this article, we suggest that the composition of possessed money in the consumer's hand can have an effect on consumer's perception about their monetary sacrifice. It is based on previous research about denomination of money that will be discussed in the next section.

## Denomination effect on consumers' way of thinking

Money indicates not only the value of products or services, but also cognitive and social meaning. Because of this characteristic of money, it can affect consumer's way of thinking (Shafir, Diamond \& Tversky, 1997; Vohs, Mead, \& Goode, 2006). For instance, money priming lessens the tendency of helping others and asking for help from others, because it triggers
people to think in self-sufficient way. Like this, money itself has a power to change consumer's mind-set.

In line with effect of money itself, the composition of money in one's hand can influence consumer's way of thinking. The same amount of money can compose in a different way. For example, ' $W 10,000$ ' can be composed not only $\# 10,000$ bill, but also 10 of 1,000 bills and these different units of money are called 'denomination'. Most of studies about the denomination effect focus on the perceived value of money in one's hand. More specific, people feel additional value when they have a large denomination even if the amount of money is same (Mishra et al, 2006). This phenomenon can be explained by gestalt notion and mental accounting. First, gestalt notion states that assessment of the whole is more than, or at least different from the assessment of the sum of parts (Kimchi, 1992). In accordance with this state, people feel $\$ 100$ bill is more valuable than 10 of $\$ 10$ bills because $\$ 100$ has additional value as a 'whole'. Second, Raghubir and Srivastava (2009) explained the same phenomenon on the basis of mental accounting. People tend to place large denomination in "real money" account and easily give a meaning to the money in contrast to a small denomination which is placed in "petty cash" account (Heath \& Soll, 1996). As a result, people more cherish the large denomination than the small, especially when they have self-control goal. However, these
studies are limited in that they focus only on how people view their own money.

There is also another stream of research about the effect of denomination. This stream highlights the way people interpret price, and it is a different perspective from the research focusing on how people view their own money. In these studies, people tend to spend more money if they have a large denomination (Ahn et al, 2008). In detail, people feel comfortable when a price of product matches to the denomination of money they own, on account of cognitive convenience (Ahn, Kim \& Park, 2012). In accordance with this stream, we suggest that the denomination can have an effect on the way people look at the product price on the grounds of the particular characteristic of denomination.

## Denomination as category and consumer construal

One of the most important roles of money is to indicate the monetary value of an object, as other kinds of scales do. Just like other scales, money has its multiple levels of units (Stevens, 1946; Wiese, 2003; Lembregts \& Pandelaere, 2013). For instance, we specify the same weight of an object by using multiple levels of unit like ' kg ', ' g ', and ' mg '. Similar to this, the monetary value of an object can be specified by the denominations of money like ' $W 10,000$ ', 'W5,000', and ' 1,000 '. And this multiple levels of unit can work as a category cue.

According to the research about unit, a large unit which expresses same attribute relatively broad and comprehensive corresponds to a broad superordinate category and a small unit which expresses same attribute relatively narrow and detailed corresponds to a narrow subcategory (Linville, 1982). Put together, a large denomination which specifies the same monetary value broadly coincide with a superordinate category and a small denomination which specifies the same monetary value narrowly coincide with subcategory.

Since the denomination of money works as a category, it can change consumer's mind-set. Previous research about category showed that people's mind-set is affected by the category which they were exposed to (Ülkümen et al, 2010). To be specific, people who are exposed to a superordinate category tend to think in a broad and comprehensive way. On the contrary to them people who are exposed to a subcategory think in a narrow and detailed way. In conclusion, People exposed to a superordinate category are more likely to focus on fundamental attribute of an object, whereas people exposed to a subcategory are more likely to focus on detailed considerations and process.

According to the construal level theory, people represent the same object in different ways depending on their psychological distance. a person represent distant events or objects in a 'abstract' level which concentrates on the result, gist and the reason. However a person represent
near events or objects in a 'concrete' level which concentrates on process and subordinate features(Trope, Liberman, Wakslak, 2007). And these two ways of representations are correspond with the mind-set triggered by category. To be specific, mind-set triggered by a superordinate category corresponds with 'abstract' representation, while a subcategory corresponds with 'concrete' representation (Trope \& Liberman, 2010; Trope, Liberman, Wakslak, 2007). People who are represent things in Putting all together, a denomination can work as a category and trigger specific mind-set. In detail, a large denomination causes abstract representation like superordinate category and a small denomination causes concrete representation like subcategory.

## STUDY 1

To sum up, studies about unit and category have proven that a large denomination make consumer think in a broad and comprehensive way focusing on the result of event and small denomination make consumer think in a narrow and detailed way focusing on the process. Also, on the basis of the studies about role of price, the price as a quality cue is associated with the result of purchasing, whereas price as cost is associated with the process of purchasing (Raghubir \& Srivastava, 2009). Therefore, consumer who has a large denomination feel lower (vs higher) monetary sacrifice than
consumer who has a small denomination, because the large denomination help consumer to focus less on the process and to underestimate the role of price as cost. In contrast, the consumer who has a small denomination feel monetary sacrifice more, because they focus more on the process of event which makes them sensitive to the role of price as cost.

The main purpose of study 1 was to investigate the role of denomination level on people 's perceived monetary sacrifice. Our hypothesis of study 1 is as follows.

H1. Perception of monetary sacrifice will be greater when people have small denomination of money than when people have large denomination of money.

## Method

## Experimental design

Study 1 tested the effect of denomination on the participants' perception of monetary sacrifice. Therefore an independent variable of study 1 was the denominations of money and a main dependent variable was participants' perceived monetary sacrifice when they considered purchasing relatively expensive product. For the study, we took an independent group design.

## Experimental procedure

Seventy three students attending Chung-Ang University were participated in our experiment and they were randomly assigned to two conditions (Small denomination vs. Large denomination). Participants watched an experimental scenario through a monitor and were asked to answer the research questions in the paper we gave.

In the scenario, first the situation that participants received a reward for attending the experiment was given, and each experimental condition group was shown the same amount of money presented a different denomination bill on the monitor. For the small denomination condition, we showed 10 of 1,000 bills and for the large denomination condition, we showed one 10,000 bill to the participants.

Second, we gave purchasing situation to participants by giving scenario that participants decide to purchase coffee by the money they get
as a reward. We choose coffee because it's hard to specify the quality so that people usually infer its quality from the price. We set price of target coffee we used in the experiment as \#3,500 based on preliminary research. The result of preliminary research showed that people think 3,500 coffee looks expensive and has high quality and 1,500 coffee looks cheap and has low quality. Even though we found out that people felt 3,500 coffee is expensive by doing preliminary research, considered that participants of main study is different from the people who did preliminary research we showed W3,500 coffee and $\# 1,500$ coffee together to the participants on the monitor so that participants could feel 3,500 is expensive.

Finally, we asked participants to complete questionnaires that ask their perceived monetary sacrifice when they purchase target coffee ( $\# 3,500$ ). To be specific, we asked 3 questionnaires, 'the price of product is very expensive', 'it's a waste of money to buy a


Figure 1. experimental procedure of study 1
product,' and 'Manufacturer's advertised price for of analysis were the 52 participants who coffee is expensive.' according to previous studies (Bornemann \& Homburg, 2011). In addition, we asked perceived quality of target coffee and product involvement to screening the participants who are highly involved in a coffee. All the questionnaires were measured in 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

## Results

To examine the effect of denomination on participants' perceived monetary sacrifice, we conducted independent group t-test (Small denomination vs. Large denomination). Subjects
answered correctly to the manipulation check questionnaires. To be specific, we asked participants about the denomination they got as a reward through a scenario (e.g. On a scenario, I got 10 of 1,000 bills as a reward. / Yes or No).

Result for the perception of monetary sacrifice on average shows that the participants who got 10 of 1,000 bills feel larger monetary sacrifice than who got one $\$ 10,000$ bill (large denomination) when they purchase 3,500 coffee. The analysis reveals a significant effect of denomination (Denomination small $=4.02$ vs. Denomination $\left._{\text {large }}=3.35 ; \quad \mathrm{t}(48)=2.45 \mathrm{p}<.05\right)$. But in the the perception of quality, participants' showed no significant difference on

Table 1-1. Means and standard deviation of perceived monetary sacrifice

|  |  | N | M | sd | t | p |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Denomination | Small | 25 | 4.02 | .71 |  |  |
|  | Large | 23 | 3.35 | 1.21 | $2.45^{*}$ | .03 |



Figure 2. Means of perceived monetary sacrifice
perception according to the denominations $\left(\right.$ Denomination $_{\text {small }}=3.36$ vs.. Denomination ${ }_{\text {large }}=$ 3.58; $\mathrm{t}(48)=-2.20, \mathrm{p}>.05)$.

## Discussion

In line with our hypothesis, when participants had large denomination rather than small denomination, they perceived lower monetary sacrifice in purchasing relatively expensive product, although the amount of money they had was same regardless of the denomination size.

Even though the result of study 1 supports our hypothesis, whether it was caused by the participants' way of representation is not clearly demonstrated, since we did not examine participants' way of representation directly. Furthermore, we only examined the perceived monetary sacrifice as a main dependent variable which is more or less away from participants' real purchasing behavior. Therefore, to improve these limitations, study 2 examined the underlying mechanism of denomination effect on perceived monetary sacrifice and measured dependent variable more closely related to actual purchasing behavior, product attitude.

## STUDY 2

Study2 has two goals. The first goal is
extending the result of study 1 by examining participants' attitude toward product as well as perceived monetary sacrifice. If monetary sacrifice is an important factor that determine purchase decisions as we suggest based on previous research, denomination effect on not only perceived monetary sacrifice but also participants' attitude toward the product. To be specific, product attitude will be lower when people have small denomination of money than when people have a large denomination of money(Bornemann \& Homburg, 2011).

Second, we tried to determine the underlying mechanism of the result revealed in study 1. We suggested that the perception of monetary sacrifice is affected by denomination because the denomination of money consumer has changes the way of consumer's representation(Stevens, 1946; Wiese, 2003; Ülkümen et al, 2010; Lembregts \& Pandelaere, 2013). To assure our suggestion, we measured participants' representation by BIF(Behavior Identification Form). Furthermore, we added conditions that activate the participant's representation which is opposite to the representation occurred by the denomination. If our suggestion is legitimate, perceived monetary sacrifice and attitude toward product will not be differentiated depending on denomination when opposite representation is activated because activation of opposite representation will incapacitate the effect of the denominations on participants' representation. Our hypothesis is as follow.

H2. consumer's representation will mediate the effect of denomination of money on consumer's product attitude.

## Method

## Experimental design

Study 2 assumed that the denomination effect would occur because person's way of represent the price changes by the denomination size. To examine this, we measured participants' BIF as well as attitude toward target product (relatively expensive coffee). Furthermore, we added 2 conditions whose participants were additionally activated the opposite representation to the representation triggered by the denomination size. To demonstrate our hypothesis we took 2(Denomination: small vs. large) by 2(Opposite representation: Not activated vs. Activated) between subject design.

## Experimental procedure

One hundred eighteen students attending Chung-Ang Univerisity participated in our experiment and they were randomly assigned to 2 (Small denomination vs. Large denomination) by 2 (Opposite representation Not activated vs. Activated) between subject design. Procedure of study2 was almost same as study 1 , except representation inhibition conditions.

In opposite representation activation conditions, we added one more task after showing small (10 of 1,000 bills) or large (one 10,000 bill) denomination. To be specific, we asked the participants in small denomination condition to write down 3 reasons of purchasing coffee and we also asked the participants in large denomination condition to write down 3 ways of coffee purchasing process. Because thinking about the reasons of purchasing can induce abstract representation and thinking about the process of purchasing can induce concrete representation, they can neutralize the representations triggered by denominations (Trope \& Liberman, 2010).

Rest parts of experiment are same as study 1. We gave purchasing situation through scenario that stated participants decided to purchase coffee with the money they got as a reward. And they were shown $\# 3,500$ coffee and \#1,500 coffee together on the screen. After this process we asked participants to complete questionnaires that ask their perceived monetary sacrifice when they purchase target coffee ( $W 3,500$ ) and attitude toward target coffee (e.g. I think this product is attractive) by 5 -point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

In addition, we gave participants BIF (Behavior Identification Form) which is created to measure the mental representation of person and introduce BIF as a task to test one's personality (Vallacher, \& Wegner, 1989). To answer the BIF, participants need to select
between two options which state same behavior in different way. One of the options states the same behavior in a higher construal level focusing on 'Why' aspect, and the other option states the same behavior in a lower construal level focusing on 'How' aspect. Here is an example:

## 1. Making a list

a. Getting organized
b. Writing things down

If participant has abstract (vs. concrete) representation, then participant will choose the option of higher construal level (vs. lower construal level). We encoded 1 to participants who choose higher level option and 0 to participants who choose lower level option. In the previous study, they used sum of BIF value for each questionnaires as a participant's representation value and higher value means relatively higher representation(Vallacher, \& Wegner, 1989).

Finally participants responded to manipulation check and demographic questions and the whole survey finished.

## Results <br> Mediation effect of representation

Before analyzing mediation effect, we did
three t -tests. First, we put denominations as a independent variable and monetary sacrifice as a dependent variable to replicate the study 1 . The analysis reveals that perception of monetary sacrifice on average shows that the participants who got 10 of 1,000 bills feel larger monetary sacrifice than who got one 10,000 bill (large denomination) when they purchase \#3,500 coffee(Denomination small $=3.84$ vs.. Denomination large $=3.22 ; \quad \mathrm{t}(47)=2.30, \mathrm{p}<.05)$. Second, we put denominations as a independent variable and product attitude as a dependent variable to determine suitability of product attitude as a dependent variable that substitutes monetary sacrifice. In line with perception of monetary sacrifice, participants who got 10 of \#1,000 bills shows lower product attitude than who got one 10,000 bill (large denomination) when they purchase $\# 3,500$ coffee (Denomination $_{\text {small }}=2.33$ vs.. Denomination large $=$ 2.82; $\mathrm{t}(47)=-2.06, \mathrm{p}<.05)$. Third, to compare the difference of representation between small and large denomination by put BIF score as a independent variable. This analysis reveals significant difference on representation according to the denominations as we expected (Denomination $_{\text {small }}=2.43$ vs.. Denomination large $=$ 3.29; $\mathrm{t}(47)=-2.68, \mathrm{p}<.05)$.

To determine mediate effect of representation, we conducted 3 linear regression analysis following Baron and Kenny (1986). First, we put denomination as a independent variable and representation as a dependent variable and
examine the prediction power of denomination. This analysis reveals significant prediction power of denomination to the representation ( $\beta=0.34$, $\mathrm{p}<.05$ ). In detail, representation was getting more abstract when the denomination was getting bigger.

Second, we put denomination as independent variable attitude toward product as a dependent variable and examine the prediction power of denomination. This analysis also reveals significant prediction power of denomination to attitude toward product $(\beta=0.29, \mathrm{p}<.05)$. Specifically, small denomination predicted lower score of attitude toward product than smaller denomination.

Finally, we put both denomination and representation as independent variable and attitude toward product as a dependent variable and conducted multiple regression analysis. This analysis showed that denomination loose its prediction power to attitude toward product when representation was put together as
independent variable and representation sustain its prediction power ( $=0.17, \mathrm{p}>.05 ;=0.33$, $\mathrm{p}<.05$ ). To sum up these results, participants' representation perfectly mediated the effect of denomination.

## Attitude toward target product

To test our assumption, we conducted 2(denomination: Small vs. Large) by 2(Opposite representation not activated vs. activated) between subject analysis of variance (ANOVA). This analysis revealed the expected two-way interaction between denomination and opposite representation activation $(\mathrm{F}(1,95)=4.20, \mathrm{p}<.05)$. Participants assigned to large denomination reported the highest score on attitude toward product when a opposite representation was not activated $(\mathrm{M}=2.82, \mathrm{sd}=.66)$. And participants assigned to small denomination reported the lowest score on attitude toward product when a opposite representation was not activated

Table 2-1. Results of regression analysis

| Effect | B | SE | $\beta$ | t | p |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stepl(=.14) |  |  |  |  |  |
| $A \rightarrow B$ | . 86 | . 32 | . 38 | $2.72^{*}$ | . 01 |
| Step2(=.15) |  |  |  |  |  |
| $A \rightarrow C$ | . 49 | . 24 | . 29 | 2.06* | . 04 |
| Step3( $=.43$ ) |  |  |  |  |  |
| $\mathrm{A} \rightarrow \mathrm{C}$ | . 28 | . 24 | . 17 | 1.15 | . 26 |
| $\mathrm{B} \rightarrow \mathrm{C}$ | . 24 | . 11 | . 33 | $2.25 *$ | . 03 |

A: Denomination, B: Representation, C: Attitude $\quad * p<.05$

Table 2-2. Results of analysis of variance on attitude toward product

|  | SS | df | MS | F | p |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Denomination (A) | .62 | 1 | .62 | .98 | .33 |
| Opposite representation(B) | .07 | 1 | .07 | .12 | .73 |
| A*B | 2.65 | 1 | 2.65 | $4.20^{*}$ | .04 |
| Error | 59.90 | 99 | .63 |  |  |
| Total | 737.22 | 98 |  | $*<05$ |  |



Figure 3. Means of attitude toward product
$(\mathrm{M}=2.33$, $\mathrm{sd}=.94)$. The scores of opposite participants who got small denomination in representation activation condition were in the middle of control groups' scores. In detail, participants who got large denomination in opposite representation activation group show a little lower score $(\mathrm{M}=2.55, \mathrm{sd}=.89)$ than opposite representation activation group ( $\mathrm{M}=$ 2.72, $\mathrm{sd}=.67$ ). Additionally, the denominations (Small vs. Large) and opposite representation activations (Activated vs. Not activated) had no main or interaction effects on the perception of
target product quality $\left(\mathrm{F}_{\text {denomination }}(1,95)=.67\right.$, $\mathrm{F}_{\text {oppositedenomination }}(1,95)=.00, \mathrm{~F}_{\text {interaction }}(1,95)=$ .13).

## Discussion

Study 2 expanded the understanding of study 1, by measuring attitude toward product which is closely related to consumer's real purchasing behavior. As expected, participants showed more positive attitude toward target product when they had large denomination. In addition we found out that the effect of denomination on the attitude toward product is valid through the participants' representation. When the representation is inhibited by triggering opposite representation, the effect of denomination was disappeared and the mediate effect of representation was significant. To sum up all the results of study 2 showed the same tendency as we suggested so that our hypothesis was supported.

## GENERAL DISCUSSION

Different from previous studies about the denomination effect, we mainly focused on how the denomination of money owned by consumers influences their representation, which results in the differences of price perception and attitude toward the product. To be specific, a consumer
who has small denomination bills can feel bigger monetary sacrifice and who has a large denomination bill. It is because the small(vs. large) denomination which is a narrow(vs. broad) category cue can trigger concrete(vs. abstract) mind-set (Borneman \& Homburg, 2011; Lembregts \& Pandelaere, 2013; Ülkümen et al, 2013).

In study 1, we find out that participants' perception of monetary sacrifice was relatively low when participants got large denomination of money. To expand study 1 , we examine participants' representation by $\operatorname{BIF}$ (Behavior Identification Form)and attitude toward product in study2. According to the results participants' attitude toward product is more positive when they had large denomination than they had small denomination only when the function of representation was not inhibited. Thus, the denomination effect on product attitude is mediated by the representation. To be specific, large denomination triggered more abstract representation and it caused a relatively more positive attitude toward the product.

These findings have several important research implications. Usually, many studies focused on the factor that can be manipulated by marketers to understand consumers' purchase decision making (Bornemann \& Homburg, 2011; Yan \& Sengupta, 2011; Gourvile, 1998). However, our research focused on the factor of consumers' own and showed that it has considerable effect on a consumers' purchase decision making. Also, we
expand previous denomination studies by examining the underlying mechanism of the denomination effect. We suggest that the denomination of money can trigger different types of representation on the ground of studies about a category cue, and it was proved through the experiment. Furthermore, our finding can be applied by marketers who provide successive purchasing situation. To be specific, by giving change in a large denomination marketer can encourage consumer who is shopping in a mall to purchase relatively expensive product.

To complement our findings, there are some suggestion for further experiment. First of all, consumer's representation should be inhibited by task interference instead of activating opposite representation. In addition, it is needed to investigate alternative explanation about underneath mechanism of the denomination effect. For instance, it can be suggested that people feel bigger monetary sacrifice when they have small denominations because they need to pay more bills than when they have one large denomination bill they just pay it at once. According to the hedonic editing hypothesis (Khaneman, Tversky, 1979; Thaler, 1999), the pain that people might experience through divided small payments can be bigger than big one payment. Consequently, this can be the alternative explanation for the effect of a denomination on monetary sacrifice and attitude toward a product instead of consumer's
representation. In other words, people may perceive separated small bills as separated pains, which cause bigger pain through payment of those bills. Therefore, to support our findings, future research should control the level of pain occurred by the payment of bill itself. Furthermore In terms of experiment scenario and method, instead of using the image of money on the computer screen, using real money and actual purchasing situation is required to supplement our studies. In this way, to examine the denomination effect by using the real money in the consumer's own hands can contribute to understanding not only the difference representation triggered by different denominations, but also the monetary sacrifice that was one of the main dependent variables in our study.

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# 구매 의사결정에서의 디노미네이션 효과: 해석수준이론을 중심으로 

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소비자가 구매 결정을 함에 있어 중요한 가격 정보는 지불 과정에서 발생하는 '비용' 혹은 지불의 결과인 ‘품질’의 단서라는 두 가지 역할을 가진다. 일반적으로 소비자가 비용으로서의 가격의 역할에 얼마나 초점 을 두는지에 따라 금전적 손실에 영향을 미쳐 최종적인 구매 의사결정을 바꾸어 놓을 수 있다. 가격의 역 할에 대한 소비자의 관점을 이해하기 위하여, 본 연구는 지불과 밀접하게 관련 있는 소비자가 소유한 돈 에 초점을 맞추었다. 특히 본 연구는 범주화와 해석수준 이론에 대한 선행 연구들을 토대로, 소비자가 가 진 돈의 단위(디노미네이션)가 지각된 금전적 손실뿐만 아니라, 제품에 대한 태도에 영향을 미칠 수 있을 것이라 가정하였다. 즉, 큰 단위는 넓은 범주와 유사하게 상대적으로 추상적인 표상을 촉발하며, 이는 소 비자들이 비용으로서의 가격의 역할보다 품질의 신호로서 가격의 역할에 초점을 두게 할 수 있다. 다른 한편으로, 작은 단위는 좁은 범주와 유사하게 상대적으로 구체적인 표상을 촉발하며, 이는 소비자들이 비 용으로서 가격의 역할에 초점을 두게 한다. 이를 검증하기 위하여, 본 연구는 2 개의 연구를 수행하였는데, 연구 1 은 사람들이 동일한 액수의 돈을 가지고 있는 상황에서 작은 단위보다 큰 단위 조건에서 금전적 손 실을 덜 지각할 것임을 검증했다. 또한 연구 2 에서는 제품에 대한 태도에 있어 이러한 단위 효과를 확인 하였으며, 연구 결과, 큰 단위의 화폐를 가지고 있는 조건이 작은 단위의 화폐를 가진 사람들에 비해 제시 된 제품에 대하여 더 긍정적인 태도를 갖게 됨을 알 수 있었다. 더 나아가, 연구 2에서는 이러한 단위의 효과가 표상에 의해 매개됨을 밝혔다. 본 연구는 구매 의사결정, 특히 지불 순간에 소비자가 어떤 단위의 화폐를 가지고 있는지가 중요할 수 있음을 시사한다. 결론적으로 본 연구의 결과는 소비자 구매 의사결정 에 대한 이해를 넓히고, 금전적인 단위에 관한 선행 연구들을 확장했다는 점에서 의의가 있다고 여겨진다.

주요 단어 : 디노미네이션, 해석 수준, 심적 표상, 의사 결정


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