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Master's Thesis of Business Administration

# Effects of Social Exclusion and Money on Innovation Adoption Intention

– Focused on the Mediating Effects of  
Need for Uniqueness –

사회적 배제와 돈의 수단성이 혁신 제품 채택  
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August 2023

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May 2023

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# Abstract

This research examines how social exclusion influences consumers' propensity to adopt innovation. Two studies suggest how feeling ostracized causes consumers to prefer innovative products when their belief in the instrumentality of money is high (vs. low) and that these proclivities are mediated by need for uniqueness. The findings uncover that consumers' behavior in response to social exclusion depends on how strongly one perceives the concept of money and as a result, excluded consumers may chose more unique products as a strategy to deal with social exclusion, eliciting higher intention to adopt innovation. Theoretical and practical implications are addressed.

**Keyword :** Social exclusion, innovation adoption, instrumentality of money, need for uniqueness

**Student Number :** 2021-24219

# Table of Contents

Chapter 1. Introduction.....	1
Chapter 2. Theoretical Background.....	4
2.1. Innovation Adoption	
2.2. Social Exclusion, Instrumentality of Money, Innovation Adoption	
2.3. Need for Uniqueness and Innovation Adoption	
Chapter 3. Study 1.....	13
3.1. Method and Procedure	
3.2. Results	
3.3. Discussion	
Chapter 4. Study 2.....	19
4.1. Method and Procedure	
4.2. Results	
4.3. Discussion	
Chapter 5. Conclusion.....	29
5.1. General Discussion	
5.2. Implications	
5.3. Limitations and Further Research	
Bibliography .....	37
Appendix.....	49
Abstract in Korean .....	57

# Chapter 1. Introduction

Innovative products are shaping our future. The positive impact of innovative products on consumers and businesses is well established. Innovative products such as Google's driverless cars, Nest thermostats, and smartwatches not only offer more efficient solutions to everyday problems more efficiently but also create new product categories and revenue streams for businesses. The success of most firms relies on consumers' willingness to purchase innovative products (Chandy and Tellis 1998; Geroski, Machin, and Van Reenen 1993) and Barczak, Griffin, and Kahn (2009) indicates that approximately 49% of firms' profits relies on successful new product development.

Innovative products not only provide functional benefits but also have social implications, such as expressing uniqueness. Previous research has found that consumers adopt innovative products as a way to manage their impression without using verbal communication (Wood and Hoeffler 2013). However, while most research on innovation adoption focuses on factors such as product attributes (Moreau, Markman, and Lehmann 2001; Wood and Lynch 2002), prior knowledge (Mehta, Hoegg, and Chakravarti 2011), motivation (Mehta, Dahl, and Zhu 2017), and personality (Hirshman

1980; Im, Bayus, and Mason 2003; Uhl, Andrus, and Poulsen 1970), limited research has explored the social dimensions of adoption.

Moreover, the majority of studies in this area have focused on investigating the influence of passive social influences like mere social presence (Xu, Mehta, and Herd 2019) and social comparison (Chung and Lee 2019). More specifically, according to Xu et al. (2019), when people are around familiar individuals, the potential negative social consequences of adopting innovative products may outweigh the positive benefits of expressing uniqueness. However, when innovativeness is widely accepted as the norm, people are more likely to purchase innovative products. The latter researchers demonstrated that when consumers engage in upward social comparison (vs. no social comparison), consumers who engage in holistic thinking tend to give more importance to the symbolic advantages of adopting innovative products, leading to greater intention to adopt such products (Chung and Lee 2019).

Aiming to expand upon this research, the present paper explores whether social exclusion may play a role in shaping attitudes toward innovation adoption. I argue that consumers who are socially excluded may adopt or resist innovation contingent on their belief in the instrumentality of money. Despite the common belief that advancements in technology would reduce social

exclusion, studies indicate that loneliness has actually increased in modern societies in the span of the last four decades (Twenge, Catanese, and Baumeister 2002; Putnam 2000). When consumers face difficulties in creating or keeping social relationships, they may seek refuge in money as a means of substituting for popularity (Duclos, Wan, and Jiang 2012). When primed with money, consumers have less dependency on others (Vohs, Mead, and Goode 2006) and have a stronger need for uniqueness (Ma et al. 2017). Accordingly, I predict that after experiencing social exclusion, consumers who are primed with the concept of money's instrumentality will sense more need for uniqueness and exhibit a more favorable response towards product innovation. With this in consideration, the subsequent sections of this is organized as follows.

Study 1 analyzes whether social exclusion (vs. inclusion) and lay beliefs about instrumentality of money influences innovation adoption. Study 2 assesses when and why consumers may or may not adopt innovative products. The article proceeds with a discussion of the findings.

## Chapter 2. Theoretical Background

### 2.1. Innovation Adoption

Consumers may be willing to take on the risks and uncertainties associated with adopting new innovations because doing so allows them to achieve a sense of social superiority and perceived uniqueness (Mukherjee and Hoyer 2001). In fact, these desires to stand out from the crowd and be seen as early adopters are often the primary reasons why consumers are willing to pay additional cost or endure long queues to be among the first to purchase a new product. For individuals who have experienced negative social comparison, the feelings of superiority that come from adopting innovative products can provide an opportunity for self-enhancement and the recovery of a positive self-view (Chung and Lee 2019). In other words, the act of being an early adopter and having access to the latest and greatest products can serve as a way for individuals to increase their self-esteem and regain a sense of confidence in themselves.

Vandecasteele and Geuens (2010) have categorized motivations for adopting innovations into four types: functional, hedonic, cognitive, and social motivations. Functional motivations are driven by the desire for enhanced products in the market.

Hedonic motivations stem from the joy and excitement associated with adopting new products. Cognitive motivations arise from curiosity and the pursuit of knowledge. Social motivations, on the other hand, motivate early adoption as a way of elevating one's social standing or reputation by possessing exclusive items that others do not have or cannot purchase. This research specifically focuses on social motivations, particularly the need for uniqueness.

On one hand, adopting highly innovative products can have positive psychological rewards, as it signals to both the individual and others that the adopter is a leader and holds a superior position in society (Wood and Hoeffler 2013). Consumers perceive innovative products as symbolically superior and associate them with higher social status (Fisher and Price 1992) and opinion leadership (Moldovan, Steinhart, and Ofen 2015). Being an early adopter can imply that an individual has a higher earning and is in a leading position (Wood and Hoeffler 2013), making them feel special (Fisher and Price, 1992).

However, highly innovative products can also come with potential risks, such as performance and economic risks, as well as social risk of not being accepted by others (Ram and Sheth 1989). These risks can pose substantial barriers to innovation adoption, unlike traditional products that offer fewer symbolic advantages and

entail fewer potential drawbacks due to their extensive accessibility and consumers' past encounter with them (Gatignon and Robertson 1989; Ram and Sheth 1989; Mukherjee and Hoyer 2001).

Thus, in what manner do consumers who experienced social exclusion interpret innovation? This research is based on the idea that socially excluded consumers are motivated to signal uniqueness (Wan, Xu, and Ding 2013). Furthermore, when people feel their relationships are threatened, they may use money as a substitute for those relationships (Zhou, Vohs, and Baumeister 2009). If socially excluded individuals who engage in self-affirmation feel a reduced need for reaffiliation and instead opt for unique products (Wan et al. 2013), it is plausible that consumers with ample monetary resources, which are associated with self-affirmation (Schmeichel and Vohs 2009), may perceive assimilation to others as unnecessary. I argue that following social exclusion, consumers' acceptance or resistance towards innovation is contingent upon their belief in the instrumentality of money.

## **2.2. Social exclusion, Instrumentality of Money, and Innovation Adoption**

In a social context, individuals typically attain their desired goals and outcomes through two primary means: either through

being popular and well-liked (Baumeister and Leary 1995; Smith, Murphy and Coats 1999), or through acquiring wealth and financial resources (Duclos, et al. 2012). When individuals find it difficult to establish or maintain social connections, they may seek solace in money as a substitute for popularity. Both money and group affiliation offer similar advantages, as supported by prior research on the symbolic influence of money. This research suggests that individuals who feel socially excluded are less inclined to donate to charitable causes, possess heightened desires for money, and feel increased distress when reflecting on past expenditures compared to those who feel socially included (Zhou et al. 2009). Importantly, this discomfort can be alleviated when participants have the opportunity to handle money again through activities such as counting bills. In addition, individuals who are exposed to money-related cues have been noted to exhibit diminished social connections (Capaldi and Zelenski 2016), a reduced willingness to assist (Vohs, Mead, and Goode 2008), and a preference for working alone (Vohs et al. 2006).

Xu et al. (2019) argue that the mere presence of others can amplify the perceived social risk associated with adopting innovation. However, if individuals primed with thoughts of money experience reduced pressure resulting from social exclusion (Zhou

et al. 2009), it would mitigate the perceived social risk and enhance their willingness to adopt innovative products. Moreover, previous research has suggested that when consumers are primed with thoughts of money, it influences their cognitive processes and motivates them to maximize their personal gains (Liu and Aaker 2008).

Hence, I suggest that social excluded individuals primed with money will prefer innovative products, as they can signal greater income and being in a more advanced position compared to others (Wood and Hoeffler 2013).

When people feel socially excluded, they tend to desire more money as a way to gain control over their lives. This desire for control can lead them to take more risky financial decisions, which could potentially bring greater financial rewards. If the belief that money can provide such control is eliminated, it could discourage people from taking financial risks (Duclos, et al. 2012).

Extending the above argument, if the instrumentality of money leads to more risky financial decisions, I propose that such belief can also extend to social risks leading to a higher propensity for innovation adoption. Innovative products have been perceived to carry risks, while also providing a chance for consumers to distinguish themselves (Ram and Sheth 1989).

Interestingly, Galinsky et al. (2008) have shown how having power can free people from the constraints imposed by society, enabling them to determine their own potential and limitations and achieve more creativity to express unique ideals. For example, Magee and Galinsky (2008) found that having power allows individuals to control their own results and the outcomes of others, leading to increased self-sufficiency and decreased reliance on external factors. As a result, powerful individuals are often more efficient in self-regulation and less likely to consider the opinions of others (Keltner, Gruenfeld and Anderson 2003).

Just like power, money concept can allow individuals to perceive themselves as powerful (Zhou et al. 2009), self-confident, and free (Vohs et al. 2006). Self-sufficiency theory suggests that money priming make individuals more independent and self-reliant, prompting them to behave in a way that challenges societal norms (Vohs et al. 2008). Specifically, increased self-sufficiency can lead to increased social distance, as demonstrated in studies on the psychological effects of money, where individuals who were given money showed signs of decreased willingness to help others and increased preference for working alone. In other words, people are reminded of money, they tend to disconnect from others. When individuals were exposed to visual or verbal cues related to money,

they became less willing to depend on others and less willing to be depended upon by others. (Vohs et al. 2006). Interestingly, people focused more on personalized consumption as a way to express unique preferences when selecting products or goods (Berger and Heath 2007).

Thus, social excluded consumers primed with money would have less need to reaffiliate and could have more need for uniqueness leading to a higher propensity to adopt innovative products.

### **2.3. Need for Uniqueness and Innovation Adoption**

When individuals feel that they are unlikely to be able to reconnect with others they tend to regard themselves as individualistic and distinct from others (Snyder and Fromkin 1980). Consumers' longing for uniqueness can manifest in two avenues: independence, where consumers are not swayed by the majority (Schlosser 2009) and nonconformity, where consumers seek to attain individual aspirations and freedom (Berger and Heath 2007).

Berger and Heath (2007) suggests that individuals may choose to adopt a new and innovative product as a way to signaling their unique identity, rather than for practical or cost-effective

reasons. Specifically, when people were primed to perceive products as a means of conveying identity, the identity of other prospective users had a more significant role in product evaluations such as a new digital music player; participants showed a greater liking for the new product when it was associated to a group of a distinct identity.

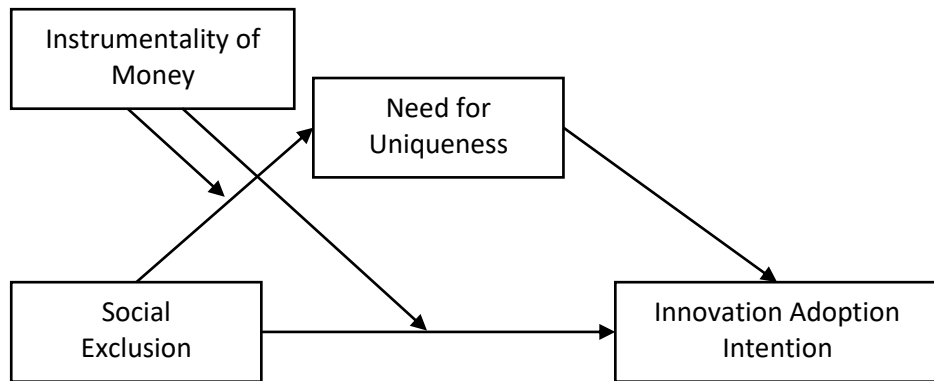
In situations where they feel socially excluded, they may consider conforming (Pickett and Gardner 2005; Maner et al. 2007; DeWall et al. 2009) or they may be more inclined to seek out distinctive products in order to reinforce their sense of uniqueness and strengthen their self-perception as different from others (Wan et al. 2013). Excluded consumers will be more motivated to show uniqueness when it is seen as socially beneficial (Berger and Heath 2007; Maslach, Stapp, and Santee 1985; Snyder and Fromkin 1980). Previous research has shown that excluded individuals chose to adhere or diverge depending on the evaluation of the circumstance and self-affirmation (Wan et al. 2013). If handling money can alleviate distress related to social exclusion, reduce willingness to make close relationship with others (Zhou et al. 2009), socially excluded consumers may be less willing to seek reaffiliation and prefer uniqueness when their belief in the instrumentality of money is heightened. I formally hypothesize the following:

**H1:** Instrumentality of money moderates the effect of social exclusion on innovation adoption intention.

**H1a:** Among socially excluded consumers (vs. included), those who have strong beliefs in the instrumentality of money have a more positive attitude toward innovation adoption.

**H1b:** Among socially excluded consumers (vs. included), those who have weak beliefs in the instrumentality of money have a more negative attitude toward innovation adoption.

**H2:** The interaction between social exclusion and instrumentality of money is mediated by need for uniqueness: Among socially excluded consumers (vs. included), those who have strong (vs. weak) beliefs in the instrumentality of money have higher need for uniqueness, which will increase their innovation adoption intention.



**Figure 1.** Research Design

## Chapter 3. Study 1

Study 1 examined how belief of instrumentality of money affects consumers' innovation adoption intention when they experience social exclusion (hypothesis 1, 1a, 1b). To this end, we asked participants to do an alleged memory study intended to manipulate the state of social exclusion experience (Mead et al. 2011; Pickett, Gardner, and Knowles 2004). Next, I assessed participants' beliefs about the instrumentality of money to satisfy one's aspirations in life. Then participants indicated their willingness to support innovative ideas (Xu et al. 2019).

In addition, this study sought to rule out socioeconomic status (SES) as an alternative explanation. Monetary resources can act as an alternative for interpersonal connections when it is threatened (Zhou et al. 2009), thus SES could be the driving force behind the proposed effect. High SES individuals exhibit solipsistic social cognitive tendencies, which emphasize the individual's own mind as the main source of knowledge about the social aspects. On the other hand, low SES individuals have contextualist social cognitive tendencies, meaning they recognize their actions to be influenced by external factors beyond their control. Thus, contrary to high SES consumers, low SES consumers are likely to conform,

while high SES consumers prioritize their own individualized self-expression leading high SES consumers (vs. low SES) to have a higher likelihood to choose unique objects (Kraus et al. 2012).

### **3.1. Method and Procedure**

One hundred and forty-two participants were recruited for a paid online survey through Prolific (45% female;  $M_{\text{age}} = 38.5$ ); 8 participants were dropped for failing attention checks. They were randomly assigned to one of the two experimental conditions (exclusion vs. inclusion). Participants began by completing an alleged memory study where they were asked to think back to a personal experience. Participants in socially excluded condition commented on a social experience where they felt excluded, and in the included condition, they elaborated on a socially included experience (Mead et al. 2011; Pickett, Gardner, and Knowles 2004). Next, participants responded to the manipulation check questions that asked to indicate to what extent they felt excluded or included (1 = not at all; 5 = very) (Carter–Sowell, Chen, and Williams 2008).

To evaluate their beliefs about the instrumentality of money to achieving life goals, participants were instructed to indicate on 1 (strongly disagree) to 9 (strongly agree) scales their level of agreement with a series of statements adapted from Tang (1995)

and Yamauchi and Templer (1982; e.g., Money allows me to determine my own life course; Money allows me to have freedom in making choices; Money allows me to pursue activities that I like). To explore the plausibility of SES as an alternative explanation for the hypothesized effect, participants were asked to indicate their perceived position in society using a drawing of a ladder with 10 rungs representing where people stand in society in terms of money, status, and influence (10 representing people at the top of society; 1 representing people at the bottom of society) (Adler et al. 2000; Anderson et al. 2012).

Following that, participants were briefed about a crowdfunding activity in which they were assigned the role of potential investors. They were informed that a center for entrepreneurship was organizing a crowdfunding campaign on Indiegogo.com. Participants were then asked to rate their willingness to fund the presented ideas on a 7-point scale (1 = not at all, 7 = very much). To conclude, all participants were asked to complete a manipulation check, indicating their perception of the level of innovation exhibited by the presented products using a scale ranging from 1 (not at all) to 7 (very much) (Sundar et al. 2014).

## 3.2. Results

### *Manipulation checks.*

A one-way ANOVA showed that those in the social exclusion condition felt that they were more excluded than their counterparts in the inclusion ( $M_{\text{excl}} = 3.88$ ,  $SD = 1.22$  vs.  $M_{\text{incl}} = 1.79$ ,  $SD = .99$ ; ( $F(1, 141) = 124.30$ ,  $p < .001$ ).

There as a non-significant interaction between social exclusion and idea types ( $F < 1$ ), suggested that participants' willingness to fund innovative ideas was not influenced by the different idea types. In addition, participant's average score on the innovative index ( $\alpha = .74$ ) was significantly above midpoint, indicating that participants perceived the innovative products as innovative ( $M = 4.44$ ,  $SD = 1.09$ ;  $t(143) = 10.27$ ,  $p < .001$ ).

### *Instrumentality of money.*

Regression analysis revealed that the interaction between social exclusion and instrumentality of money ( $\alpha = .88$ ) significantly predicted innovation adoption intention ( $\beta = .456$ ,  $t(139) = 2.379$ ,  $p = .012$ ). The main effect of social exclusion was also significant ( $\beta = .687$ ,  $t(139) = 3.59$ ,  $p = .0005$ ), but the main effect of instrumentality of money was not significant ( $\beta = -.139$ ,  $t(139) = -1.029$ ,  $p = .305$ ). To avoid multicollinearity, the average of instrumentality of money was standardized (Cohen et al. 2003).

A Johnson–Neyman floodlight analysis (Spiller et al. 2013) revealed significant floodlight regions about where instrumentality of money was higher than  $-.561$ . Thus, in regions that were higher than  $-.561$ , instrumentality of money moderated the relationship between social exclusion and innovation adoption intention. This effect was significant for 65.7% of the participants who had higher instrumentality of money beliefs than  $-.561$ , while 34.3% were insignificant. This means that when instrumentality of money is high for socially excluded consumers, innovation adoption intention increases. However, when instrumentality of money is too low, social exclusion does not have a significant effect on innovation adoption intention.

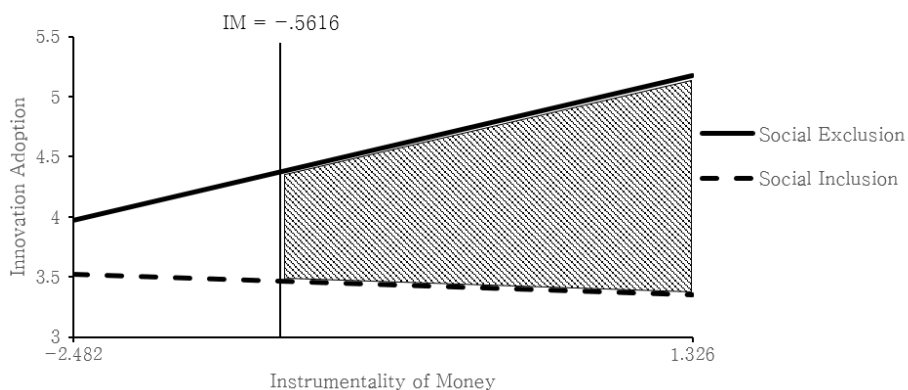
*SES.*

To examine whether SES might be the real driving force behind the findings, we conducted a regression analysis with social exclusion and SES as predictors. The results illustrated that the effect of social exclusion remained significant ( $\beta = 1.87$ ,  $t(139) = 3.36$ ,  $p = .001$ ), whereas that of SES was not significant ( $\beta = .36$ ,  $t(139) = 1.38$ ,  $p = .17$ ). Therefore, SES was ruled out as an alternative explanation.

### 3.3. Discussion

Study 1 presented preliminary findings indicating that

consumers have a stronger preference for innovative products in response to social exclusion when they have stronger beliefs regarding instrumentality of money. Confirming hypothesis 1, 1a, 1b, when participants have stronger beliefs concerning instrumentality of money, those who were excluded were more likely than those who were included to fund an innovative product. When the instrumentality of money was weak, social exclusion did not significantly influence innovation adoption. Next, study 2 uncovers the underlying factors behind the effects observed in study 1. Specifically, study 2 aims to investigate why consumers with strong (vs. weak) beliefs in money's instrumentality influences excluded individuals' preference for innovative adoption due to need for uniqueness.



**Figure 2.** Innovation adoption intention of participants across conditions.

## Chapter 4. Study 2

Study 2 was conducted to provide additional understanding of the suggested mechanism underlying the effect of social exclusion on innovation adoption and how it might function with need for uniqueness as the underlying process. Study 2 introduces some changes in procedure such as, instead of administering measures of instrumentality of money, it was manipulated through an alleged reading-comprehension task. In addition, need for uniqueness was measured to provide evidence to validate the suggested mechanism. Moreover, study 2 used a product choice task wherein participants were presented with descriptions to read and reported their willingness to buy the innovative products, rather than a crowdfunding task.

### 4.1. Method and Procedure

One hundred and eighty participants were recruited for a paid online survey through Prolific. Two participants were dropped for failing attention checks leaving a final sample of 178 participants (65% female;  $M_{age} = 38.1$ ). They were randomly assigned to conditions in a 2 (social exclusion vs. inclusion) x 3 (instrumentality of money: high vs. baseline vs. low) between-subject design.

Firstly, participants completed the same alleged memory study as the previous study where they were asked to recall a personal experience. Participants were randomly assigned to one of the two conditions. Next, participants responded to the manipulation check questions that asked to report to what extent they felt excluded or included (1 = not at all; 5 = very) (Carter–Sowell, Chen, and Williams 2008).

After the manipulation check, participants read an alleged reading–comprehension task where instrumentality of money was manipulated. Participants read a brief report suggesting that money is incredibly important in determining the quality of our life (i.e., high) or that learning a foreign language can improve overall academic achievement (i.e., baseline), or that money was often mistakenly believed to afford more freedom and control in live (i.e., not instrumental) (Duclos et al. 2012). To avoid difference in elaboration across conditions, the three reports mirrored each other in structure, syntax, and length (i.e., around 60 words).

To assess innovation adoption intention, the participants were asked to indicate their willingness to buy innovative products. To reduce perceptual bias, the words “traditional” and “innovative” in product descriptions were not used, and product names were displayed as labels (i.e., Bluetooth mouse). The information

regarding the two products were comparable in length and participants were informed that both items were priced equally and that they could afford both. Five product pairs were shown (printer, mouse, running shoes, smartphone, and watch), in which participants also indicated the extent to which they thought the products were innovative (Xu et al. 2019; Chung and Lee 2019; Wang et al. 2019).

Next, participants were asked to indicate their need for uniqueness on three items adopted from the self-attributed need-for-uniqueness scale (Lynn and Harris 1997); “Being distinctive is important to me” (1 = not at all, 9 = extremely); “I intentionally do things to make myself different from those around me” (1 = never, 9 = always); “I have a need for uniqueness” (1 = weak, 9 = strong).

## 4.2. Results

### *Manipulation checks.*

To confirm the exclusion manipulation, a one-way ANOVA was conducted. In line with predictions, participants in the exclusion condition felt more excluded than their included counterparts ( $M_{\text{excl}} = 4.07$  vs.  $M_{\text{incl}} = 1.93$ ;  $F(1, 176) = 167.36$ ,  $p < .001$ ).

There as a non-significant interaction between social exclusion and idea types ( $F < 1$ ), suggested that participants’ willingness to fund innovative ideas was not influenced by the

different idea types.

Participants also found that the innovative products were considered to be more innovative than the traditional products ( $M_{\text{excl}} = 5.54$ ,  $SD = .99$  vs.  $M_{\text{incl}} = 2.87$ ,  $SD = 1.54$ ;  $t(177) = 24.88$ ,  $p < .001$ ).

#### *Innovation adoption intention.*

First, a factor analysis was conducted to check the reliability of our innovation adoption measures, and all items loads on only one factor ( $\alpha = .83$ ), the items were averaged and the resulting score was used.

A 2 x 3 ANOVA on the score of innovation adoption intention revealed no significant main effect by instrumentality of money, but a significant main effect by exclusion ( $F(1,172) = 23.16$ ,  $p = .005$ ), and a significant social exclusion x instrumentality of money interaction effect ( $F(2, 172) = 11.93$ ,  $p = .02$ ).

When money's instrumentality is emphasized to establish control in one's life, socially excluded participants were more willing to purchase an innovative product than included participants ( $M_{\text{excl}} = 4.98$  vs.  $M_{\text{incl}} = 3.37$ ;  $F(1,57) = 13.32$ ,  $p = .001$ ), which provides further support for H1, H1a, H1b. In the baseline condition, the difference between social exclusion and inclusion was not significant ( $M_{\text{excl}} = 4.12$  vs.  $M_{\text{incl}} = 3.36$ ;  $F(1,59) = 3.44$ ;  $p = .07$ ).

When instrumentality of money beliefs was weakened, the difference was not significant ( $M_{\text{excl}} = 3.48$  vs.  $M_{\text{incl}} = 3.67$ ;  $F(1,56) = .181, p = .67$ ).

*Need for uniqueness.*

To examine the role of need for uniqueness participants' answers were submitted to a mediation questionnaire to a factor analysis. The analysis verified that all items loaded reliably on a single factor ( $\alpha = .97$ ). Therefore, the participants' answers were averaged to develop an index score to assess their need for uniqueness. An ANOVA applying this index score as the dependent variable illustrated that participants in the exclusion condition who were in the high instrumentality of money condition had a higher need for uniqueness than included participants ( $M_{\text{excl}} = 5.32$  vs.  $M_{\text{incl}} = 3.36$ ;  $F(1,57) = 10.75, p = .002$ ). In the baseline conditions, excluded (vs. included) participants indicated a lower score on need for uniqueness ( $M_{\text{excl}} = 5.19$  vs.  $M_{\text{incl}} = 3.32$ ;  $F(1,59) = 11.62, p = .001$ ). However, in the low instrumentality of money condition, the difference was not significant ( $M_{\text{excl}} = 3.89$  vs.  $M_{\text{incl}} = 3.75$ ;  $F(1,56) = .051, p = .82$ ).

Furthermore, a 2 x 3 ANOVA on the score of need for uniqueness revealed no significant main effect by instrumentality of money ( $p = .89$ ), but a significant main effect by exclusion

( $F(1,172) = 15.26, p < .001$ ), and a significant social exclusion x instrumentality of money interaction effect ( $F(2, 172) = 3.03, p = .05$ ).

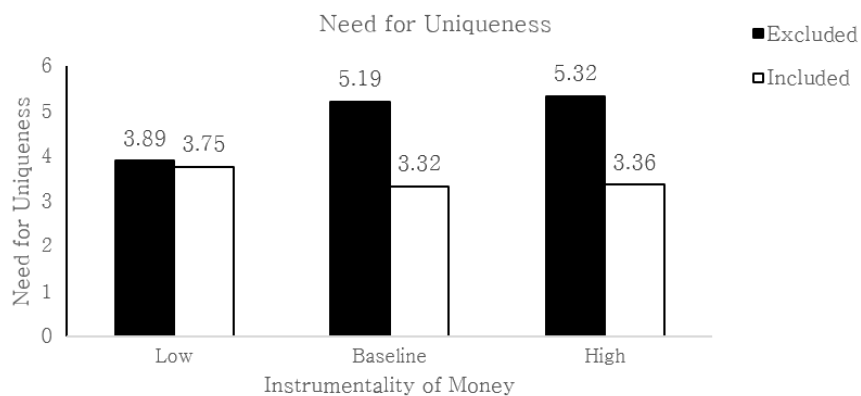
A mediation moderation analysis was conducted using Process Model 8 (Hayes 2012). Regressing participants' innovation adoption intention on participants' exclusion condition (0 = inclusion, 1 = exclusions), instrumentality of money (0 = low, 1 = baseline, 2 = high), revealed only a significant interaction ( $\beta = .72; t(173)=2.36; p = .02$ ).

A 95% confidence interval calculation around the conditional indirect effect (Preacher et al. 2007; Shrout and Bolger 2002) showed that index of moderated mediation did not contain zero ( $\beta = .19; SE = .10; 95\% CI = .02 \text{ to } .38$ ), suggesting that there were differences between the indirect effects between the different levels of the moderator. The conditional indirect effect of social exclusion on innovation adoption was significant and positive for high instrumentality of money zero ( $\beta = .46; SE = .16; 95\% CI = .20 \text{ to } .80$ ). For the baseline condition, the conditional indirect effect of social exclusion on innovation adoption was also significant ( $\beta = .27; SE = .10; 95\% CI = .10 \text{ to } .48$ ). However, the conditional indirect effect of social exclusion on innovation adoption was insignificant for the low instrumentality of money condition ( $\beta$

= .09; SE = .12; 95% CI = −.12 to .35). The direct effect of social exclusion on innovation adoption intention was significant only for the high instrumentality of money condition ( $\beta = 1.17$ ;  $p = .004$ ; SE = .40; 95% CI = .37 to 1.96). These results confirm that need for uniqueness mediates the relationship between the social exclusion by instrumentality of money interaction and the dependent variable.

Outcome Variable: Need for Uniqueness					
	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Overall Model	120.329	5	24.066	4.704	0.000
Social Exclusion	78.089	1	78.089	15.264	0.000
Instrumentality of Money	9.142	2	4.571	0.893	0.411
X * W	30.974	2	15.487	3.027	0.051
Residuals	879.918	172	5.116		

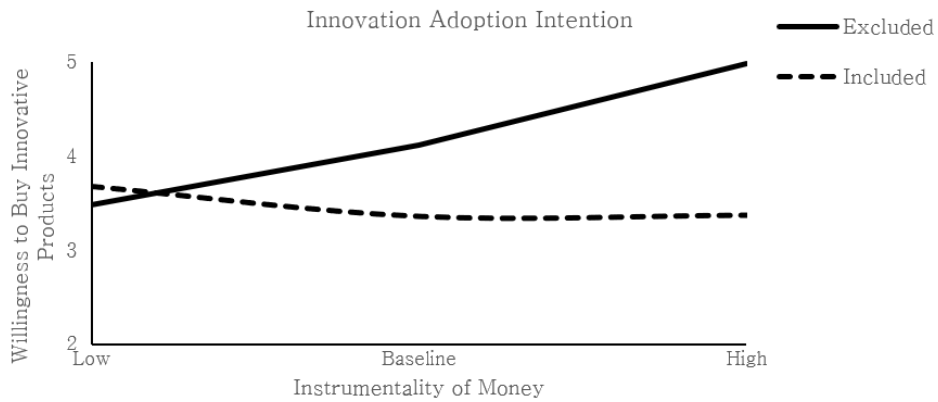
**Table 1.** Two-way ANOVA on Need for Uniqueness



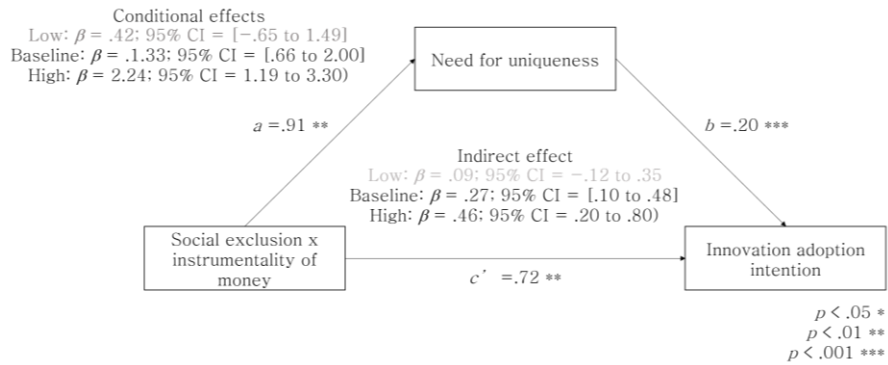
**Figure 3.** Two-way ANOVA on Need for Uniqueness

Outcome Variable: Innovation Adoption Intention				
R = .4163	R-sq = .1733	MSE = 2.62	F(4,173) = 9.0658 (p = .0000)	
Model				
	coeff	se	t	Confidence Interval
constant	2.8756	.3419	8.4109	[2.2008, 3.5504]
Social Exclusion	−.2646	.3875	−.6829	[−1.0294, .5002]
Need for Uniqueness	.2030	.0543	3.7377	[.0958, .3103]
Instrumentality of Money	−.1124	.2147	−0.5235	[−.5362, .3114]
X*W	.7169	.3035	2.3621	[.1179, 1.3159]
Direct Effect of Social Exclusion on Innovation Adoption Intention				
Instrumentality of Money	Effect	se	t	Confidence Interval
Low	−.2646	.3875	−.6829	[−1.0294, .5002]
Baseline	.4523	.2533	1.7856	[−.0477, .9522]
High	1.1692	.4030	2.9014	[.3738, 1.9645]
Indirect Effect of Social Exclusion on Innovation Adoption through Need for Uniqueness				
Instrumentality of Money	Effect	Bootstrap SE	Confidence Interval	
Low	.0853	.1199	[−.1243, .3517]	
Baseline	.2705	.0998	[.1011, .4834]	
High	.4557	.1559	[.1802, .7915]	
Index of Moderated Mediation				
	Index	Bootstrap SE	Confidence Interval	
Instrumentality of Money	.1852	.0969	[.0164, .3817]	

**Table 2.** Results for Moderated Mediation



**Figure 4.** Innovation Adoption of participants across conditions



**Figure 5.** Moderated Mediation Analysis: Need for Uniqueness as a mediator

### 4.3. Discussion

In study 2, a moderated mediation approach was employed to examine the relationship between social exclusion, the need for uniqueness, and innovation adoption. The results revealed that social exclusion increased the participants' need for uniqueness, which subsequently influenced their adoption of innovative products.

Furthermore, this effect was more distinct among participants who had a strong belief in the instrumentality of money. Thus, the study demonstrated that social exclusion can enhance the preference for innovative products, particularly when individuals perceive that money plays a significant role in achieving their desired outcomes.

## Chapter 5. Conclusion

### 5.1. General Discussion

Social approval and fostering intimate relationships are among the core requirements of human beings (Baumeister and Leary 1995). To fulfill these needs, consumers often seek ways to differentiate themselves (Wan et al. 2013). This research suggests that individuals who strongly believe in the instrumental value of money and experience social exclusion (vs. inclusion) are more likely to regard themselves as having a unique identity. Consequently, they are more inclined to prefer innovative products that possess significant potential for signaling their identity (Ma and Aggarwal 2007).

Results from the two studies support the mentioned propositions. In study 1, participants with strong (vs. weak) beliefs in the instrumentality of money, were more inclined to invest in innovative products when they were socially excluded (vs. included). In study 2, when money's instrumentality was reported to be important to thrive in the social world, socially excluded participants demonstrated a greater likelihood to purchase innovative products. Importantly, the process underlying the innovation approach to cope with social exclusion was revealed.

When participants held heightened beliefs in the instrumentality of money, they perceived themselves as more unique when they were excluded than when they were included, and this need for uniqueness was found to mediate the effect on participants' preference for innovative products.

## **5.2. Implications**

The present research makes a valuable contribution to the existing literature on social exclusion. Firstly, it systematically explores the circumstances and motivations behind individuals' choices of innovative products. Prior studies have indicated that social exclusion can influence decision-making and behaviors, leading to increased aggression and decreased pro-social actions (Mead et al. 2011; Williams et al. 2000; Twenge et al. 2001, 2007). Wan et al. (2013) uncovered that individuals strategically employ a differentiation strategy to cope with social exclusion, particularly when seeking reaffiliation is unappealing. In such cases, when exclusion is attributed to a stable cause or when individuals engage in self-affirmation, they perceive the exclusion experience as an indication of their unique identity. Consequently, they exhibit an inclination for distinctive products that serve to assert their uniqueness. The results of this research are consistent with prior research that show that excluded people are inclined to have a

higher need for uniqueness (Wan et al. 2013), and further extends the findings by uncovering that instrumentality of money can also lead people to adopt a differentiation approach as a coping mechanism for social exclusion, offering a more comprehensive picture of the effects of social exclusion.

Secondly, the present study expands upon the previous work of Zhou et al. (2009) and Duclos et al.(2012) regarding the influence of money. It sheds light on the underlying motivation behind the intention to adopt innovation by demonstrating that social exclusion, coupled with a heightened belief in the practical value of money, increases the need for uniqueness. In the absence of social support, individuals who feel isolated and hold strong beliefs in the instrumentality of money no longer actively seek reaffiliation since money can serve as an alternative means to attain their desired outcomes within the social system (Duclos et al. 2012). Social rejection and the contemplation of physical pain have been shown to increase individuals' desire for money, as money can alleviate the distress associated with ostracism and physical discomfort (Zhou et al. 2009). Reminders of money also evoke a sense of self-sufficiency in relation to others, reinforcing individuals' perception of control by instilling the belief that they can navigate life independently. Wealth provides individuals with a sense of control

over their environment, whereas its absence reduces feelings of efficacy and can lead to stress and adversity. In the lack of social support, excluded consumers require more financial resources to attain what they need to thrive in the world. As a result, social exclusion heightens the perceived instrumental value of money as a means of attaining benefits within the social system (Duclos et al. 2012). This research demonstrated the combined effects of social exclusion and the instrumental value of money on individuals' preferences for innovative products, which hold symbolic value in terms of uniqueness and status (Arbore, Soscia, and Bagozzi 2014; Bloch 1995).

The third theoretical contribution of this research expands on the factors influencing consumers' attitudes towards adopting innovation. While previous studies have focused on aspects such as market diffusion (Baumgarten 1975), market-entry strategies (Lilien and Yoon 1990), and product-development stages (Dahl and Moreau 2002), this research delves into the relatively new but crucial area of how consumers psychologically respond to innovation. Building upon prior research on the psychological benefits (Fisher and Price 1992; Wood and Hoeffler 2013) and risks associated with innovation adoption (Ram and Sheth 1989), this study specifically investigates the response of consumers who

have experienced social exclusion, a common occurrence. It reveals that among these individuals, adopting innovative products becomes attractive, particularly for those who strongly believe in the instrumental value of money.

This research has important implications for both managers and consumers. For managers, the introduction of innovation is crucial for a company's survival (Forbes 2017), as it offers opportunities for growth and competitive advantage. However, the high failure rate of innovative products poses a considerable risk and financial burden for firms. Therefore, understanding effective strategies for introducing innovation to consumers is essential to maximize the likelihood of success.

One key consideration for marketers is to consider consumers' psychological state. Our research highlights the role of social exclusion and the instrumentality of money in influencing consumers' preferences for innovative products. Marketers can leverage this knowledge by incorporating concepts of money's practical value in advertisements for innovative products. By targeting consumers who are prone to experience feelings of loneliness, marketers can tailor their messaging to resonate with these individuals and increase their willingness to adopt innovative products.

Furthermore, consumers themselves can benefit from understanding how social cues can unconsciously influence their attitudes towards innovation. By being aware of these influences, consumers can make more informed decisions and resist the potential bias triggered by social exclusion. This knowledge empowers consumers to critically evaluate their preferences and consider the practical value of innovative products, beyond their symbolic significance.

### **5.3. Limitations and Future Research**

The present study has several implications for future research. One avenue for exploration is the examination of identity signaling effects in relation to innovative products. This research adopted the commonly understood definition of social exclusion, which refers to experiences of being alone, isolated, or excluded, occasionally accompanied by overt displays of disapproval (Baumeister et al. 2005; Williams 2007). However, it is important to distinguish between social exclusion and loneliness. While social exclusion entails proactive and dynamic interactions, loneliness is a more passive state characterized by a lack of social connections. Previous research by Lee and Shrum (2012) showed that implicit ignoring can lead to increased conspicuous consumption, while explicit rejection may promote prosocial behavior. Future studies

could explore the potential differences between social exclusion and loneliness in terms of their effects on individuals' inclination to buy innovative products. This research would contribute to our understanding of how social experiences and emotional states influence innovation adoption.

Similarly, it is worth considering that the influence of social exclusion may differ based on the frequency of experiencing such exclusion and individual personality traits. Factors such as one's need for belonging or attachment style could potentially moderate the extent to which individuals react to interpersonal rejection, either intensifying or mitigating its impact. Therefore, it is important to examine how social exclusion interacts with personality dimensions to develop a more comprehensive theory regarding the influence of social exclusion on innovation adoption. This line of inquiry would contribute to a more comprehensive understanding of the complex dynamics between social exclusion, personality, and innovation adoption.

Innovation adoption is often associated with signaling uniqueness and setting oneself apart from others, as innovative products are initially embraced by a select group of consumers who influence others to follow suit. Being an early adopter of innovative products serves as a way to differentiate oneself (Burns and

Krampf 1992). However, while the uniqueness associated with adopting innovative products can be appealing, it also brings about concerns regarding potential social risks (Ram and Sheth 1989). These social risks include the fear of humiliation and the anticipation of criticism from others, as certain products may deviate from social norms (Mandel 2003). Innovation, by its nature, can be contradictory to established social norms (Runco 1991; Rudowicz and Ng 2003; Kim 2007). While innovation can be socially rewarding by allowing individuals to demonstrate their uniqueness, it can also entail social risks. It would be intriguing to explore the role of perceived social risks as a mediating variable in the context of innovation adoption. Building on the findings of Duclos et al. (2012) that socially excluded individuals exhibit higher propensities for risk-taking, it would be worthwhile to investigate whether socially excluded consumers are more inclined to purchase innovative products despite the associated risks. For instance, products like Google Glass and the Segway faced disappointing sales due to consumers feeling embarrassed, awkward, and uncomfortable while using them. Early adopters of these products encountered social stigma and were labeled as "uncool." Therefore, it would be valuable to explore ways to mitigate perceived social risks and identify individuals who are willing to take on such risks.

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# Appendix

## APPENDIX : STIMULI OF STUDIES

### Study 1 – Products used for dependent measure

A center for entrepreneurship is hosting a crowdfunding opportunity for entrepreneurs. Assume the role of a potential investor and indicate your willingness to fund the ideas on 7–point scales (1 = not at all, 7 = very much).

Meet Lumzag – The Smartest Bag Ever
<p>Made of Carbon Fiber with Leather/Nylon Application Lumzag Smart Bags are the most innovative and smart carry system to date, designed with high end materials and 7 smart features. Presented in the trinity of the Backpack, Messenger and CrossBody, Lumzag Smart Bags are the ultimate definition of what you always missed in your bag: intelligence, power, safety and control. Innovative features include:</p> <ol style="list-style-type: none"><li>1. Charge your phone wirelessly on the go, while also charging your tablet and laptop with our built–in 10,000 mAh power bank. You can also charge your AirPods using the special compartment in the bag.</li><li>2. Track your bag wherever you are, regardless the distance between you. The GPS tracker allows you always to know the exact location of Lumzag in real time. The GPS tracking is free of charge, thanks to special technology developed by Lumzag team which doesn't use internet data.</li><li>3. Always have affordable internet access, regardless of the internet connection available in the area. To assure that, we have a specially designed built–in data sim card in Lumzag which gives you an opportunity to have WiFi connection in the whole world with much lower prices than roaming internet.</li></ol>


### **Gi Fly: The First E-Bike That Folds In One Second.**

Electric, smart, maintenance-free, and foldable, Gi Fly is the future of urban commuting.

Crafted from ultra lightweight aircraft grade aluminum, Gi Fly can be taken anywhere—bus, train, office, elevator, or locker—without compromise. Gi Fly gives people exactly what they need. Freedom to ride without excess or restraint.

#### **Feature List:**

- FlyFolding System: Folds in one single second, and in one simple motion.
- Electric Flight Assistance: Rides 40 miles (60 km) on a single LifePo4 battery charge.
- GPS System: Syncs wirelessly with iOS and Android.
- Solid, Anti-Puncture Tires: No more flats.
- Belt Drive: Maintenance free riding. No grease. No noise. Your pants are safe.
- USB Phone Charger: Stays connected and never runs out of battery.
- Smart Locking System: Locks automatically when you are 10 feet (5 meters) away.
- LED Smart Lights: Controlled remotely and automatically with the app.
- Sharing Program: Create a personal profile and share your Gi FlyBike with friends.



(Stimuli was presented in GIF format to show foldability.)

### Sensorwake: Wake up refreshed and on time!

Sensorwake Trio fully wakes you up in three minutes. It starts with your favourite smells followed by a soothing light and a motivating melody.

It's a simple concept. Let's activate all of your senses to wake you up more fully. Featuring safe, clean-air dry diffusion technology to leave you waking up refreshed.

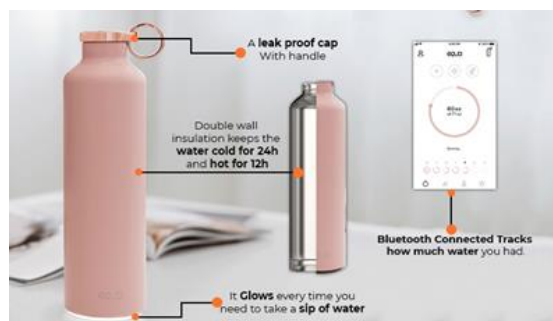
With Sensorwake Trio, you choose from a wide variety of smells, like coffee, the beach, forest, or peppermint. Change them out as often as you change your mind. Stop hating your alarm clock. Start making your mornings better.



### EQUA Smart Water Bottle

EQUA Smart Water Bottle is a combination of beautiful design and technology.

Together with EQUA app it provides a full insight of hydration based on a personal data, sends you glow reminders, calculates and tracks your daily water intake. It even enables you to detach from your mobile phone for a while and stay up to date of your hydration by using a smart gesture.



## Mini PC – The Power of a Desktop in the Palm of your Hand

Mini PC is as capable as a desktop computer. Made compact for ultimate portability and complete with features to make it powerfully versatile, you'll always have all the utility of a computer – in your pocket.

Fully operational Windows 10

Mini PC runs a desktop version of Windows 10, which means you can run all of your Windows programs with no problems.



All this from a 5–inch device that can fit in your hand!




Mean Innovativeness Score for Products Used in Study 1

	<i>M</i>	<i>SD</i>	<i>p</i>
Lumzag	5.13	1.486	0.000
Mini PC	3.71	1.877	0.023
Gi Fly	3.06	1.472	0.000
Sensorwake	4.46	1.747	0.000
Equa	3.85	1.870	0.028

## Study 2 – Products used for dependent measure

Printer	
<b>Printer</b>	
For all your work or home printing needs. Print from your iPhone, iPad, Android or tablet. Quick and easy wireless setup.	
	
<b>Mini Robotic Printer</b>	
The printer is outfitted for our day to day life. It has rechargeable battery and an on/off switch. It connects directly to smartphones and on PCs, and allows the user to print on any size piece of paper.	
	

Mouse	
<b>Bluetooth Mouse</b>	
Navigate the web without the limitations of a cable. Compatible with both Windows and Mac computers, simply pair the mouse using wireless Bluetooth 5.1 connection. It has 6 buttons that grant you total control, including left, right, scroll, DPI adjustment, forward and back.	
	

### Propoint Mouse

Reduce pain and discomfort with the unique ergonomic pen-grip. Comfort and precision at your fingertips. ProPoint is wireless, lightweight and portable, whether presenting live or via virtual meeting, inspire your audience with advanced presentation tools unlike any other mouse in the world, due to built-in Gyroscope for smooth zooming, panning, rotating.



### Shoes

#### Running Shoes

Lighter weight. New plush transition zone for a smoother ride. Improved fit from 3D Fit Print overlays. Runner's World "International Editor's Choice" award winner. The smoothest ride possible, for runners who want a plush, adaptable fit.



#### Solay Shoes

This new running shoe comes with a modular, removable mid-sole which can easily be changed by the runner whenever a new sole is needed. During the course of a training, runners usually have to replace running shoes every 3 months, as the thick foamed mid sole in the shoe gets compressed and loses the resiliency, which provides critical support needed for the runner's feet. This thus prolongs the life of the shoes by several months and allows the runners to train in the shoes with which they have become comfortable.



## Smartphone

A traditional smartphone.



A foldable smartphone with a folding display.



## Watch

A traditional watch.



A smartwatch.



Mean Innovativeness Score for Products Used in Study 2					
	Traditional Product	SD	Innovative Product	SD	p
Mouse	3.15	1.724	5.73	1.372	.000
Printer	2.66	1.753	6.05	1.232	.000
Shoes	2.76	1.737	5.63	1.401	.000
Smartphone	3.49	1.932	5.17	1.471	.000
Watch	2.29	1.682	5.11	1.727	.000

## 국 문 초 록

기술의 급속한 발전이 새로운 혁신제품이 끊임없이 소개되고 있다. 이에 본 연구는 사회적 배제와 돈의 수단성이 혁신 제품 채택 의도에 미치는 영향에 대해 살펴보고자 하였다. 본 연구는 돈의 수단성에 대한 높은 믿음과 사회적 배제의 상호작용이 혁신 제품 채택 의도에 미치는 영향을 두 개의 실증연구를 실시하였다. 첫 번째 실험에서는 돈의 수단성이 강조가 된 상황에서 사회적 배제 당한 사람들이 혁신 제품 채택 의도가 더 높았던 것을 발견하였다. 두 번째 실험에서는 이러한 상호작용 효과의 기저 독특성 욕구의 조절된 매개효과 또한 검증하였다. 종합적으로, 돈의 수단성에 대해 높은 믿음을 가진 소비자들 중 사회적 배제를 경험한 경우, 독특성 욕구가 더 높게 느껴지며 전통적인 제품보다 혁신 제품 채택할 의향을 확인하였다. 본 연구 결과를 통해 선행연구의 확장에 이론적으로 공헌하고 시사점을 논의하고, 향후 연구 방향성을 제안하였다.

**주요어:** 사회적 배제, 혁신제품 채택 의도, 돈의 수단성, 독특성 욕구

**학번:** 2021-24219