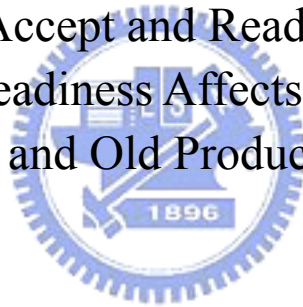


國立交通大學
運輸科技與管理學系碩士班

碩士論文

換新就緒度及汰舊就緒度：
消費者就緒度對於新產品購買意願與舊產品
賣出意願的影響

Readiness to Accept and Readiness to Reject:
How Consumer Readiness Affects Their New Product
Buying Intention and Old Product Selling Intention



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摘 要

由於科技的進步，新產品不斷地推出；有些新產品成功地被消費者接受，但有些新產品卻不是那麼成功。現有關於新產品採用的文獻大多將購買新產品與處理舊產品視為同一件事，然而在現實生活中，接受新產品不一定代表著處理掉舊產品，在同一個產品類別中，同時擁有多個產品是有可能的。過去研究較少探討消費者在同一產品類別中擁有多個產品的背後原因，為了釐清過去未探討的部份，本研究提出新產品接受與舊產品處理應該被視為兩個維度。另外建立在就緒度的概念上，本研究認為應該存在兩種就緒度：換新就緒度以及汰舊就緒度，就緒度中介了前導因素對於行為意象的影響。分析結果驗證本研究的假設：就緒度應該分成兩個維度。另外，本研究發現換新就緒度對於新產品的購買意象影響較大於汰舊就緒度的影響，汰舊就緒度對於舊產品的賣出意象影響較大於換新就緒度的影響。

關鍵字：新產品接受、舊產品處理、就緒度

Readiness to Accept and Readiness to Reject: How Consumer Readiness Affects Their New Product Buying Intention and Old Product Selling Intention

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Abstract

As technology advances, companies keep introducing new products. However, some new products are successfully accepted by consumers but some do not. Extant literature of new product adoption mainly considers buying new product and disposing old product as one thing. In reality, accepting new product does not necessarily equivalent to rejecting old product. Multiple products ownership in a category is possible. Relatively little research examine the underlying mechanism for multiple product ownership. To clarify the missing part, we propose that new product adoption and old product disposition should be served as two separate constructs. Building on the theory of “readiness”, we believe that there exist two kinds of readiness: consumer readiness to accept new product (RA) and consumer readiness to reject old product (RR), which are positioned as the mediator between antecedents and consumers’ behavioral intention. Critical antecedents of new product buying intention (price fairness, subjective norm, innovativeness, discomfort, optimism, and insecurity) and old product disposition intention (residual value, emotional attachment, and status quo bias) are examined. The result supports our proposition that readiness should be classified into two perspectives. Furthermore, the result suggests that buying intention is significantly influenced by RA but RR. Selling intention is majorly affected by RR than RA. The mediation effect of RA and RR is also validated.

Keywords: new product adoption, old product disposition, readiness

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Readiness to Accept and Readiness to Reject: How Consumer Readiness Affect Their New Product Buying Intention and Old Product Selling Intention

1. Introduction

With the rapid development of technology, company is able to provide new products constantly. The new products replace old ones by providing either incremental functions or totally new functions. Some new products are successfully accepted by consumers, and soon penetrate the market. For example, Nintendo launched Wii in December 2006 and became the market leader in 2007 and 2008 (out sale Xbox 360 and PS3). Nintendo anticipates worldwide sales of the Wii to reach 50 million units by March 2009. However, there are also some new products which can not be accepted by consumers, and are not readily welcomed in the market. Such as the Segway Scooter which was unveiled with hype of Jeff Bezos and Steve Jobs in 2001. Segway was released for sale in 2002, by September 2006, only 23500 units had been sold (CPSC U.S. 2006). Earlier research in new products provides limited theories to explain why consumer accept or reject the new product.

Recently, researchers propose a concept of “readiness” which is useful to explain consumers’ attitude toward new products, and their adoption behavior of new products (Bitner et al. 2002; Meuter et al. 2005; Parasuraman 2000). This is because that new products usually come with innovative technologies that drastically change the way people interact with products. Therefore, new products may lead to the perception of discomfort and insecurity (Parasuraman 2000), and further decrease consumers’ motivation to purchase the new product. Consumers need to have technology-readiness, which refers to people’s propensity to embrace and use new technologies for accomplishing goals in home life and at work

(Parasuraman 2000), so that they may accept the new product. Furthermore, researchers note the role of consumer readiness as an important mediator of the relationship between antecedents of new product adoption and consumer adoption behavior (Meuter et al. 2005). More specific, the innovation characteristic of new products are able to enhance consumers' motivation and ability, thus consumers are more likely to adopt the new product. Comprehensively, the concept of readiness is important in understanding consumers' behavior of new product adoption.

Most of the above-mentioned research discusses new product adoption from the perspective of new product property. However, some studies emphasize the effect of old product on the purchase new product (Okada 2001; Okada 2006; Zhu et al. 2008). For example, providing trade-in of old product can increase consumers' willingness to purchase new product. In other words, if consumers can properly dispose the old products, new product adoption could be easier. This stream of research focuses on consumers' disposition behavior, and identifies factors that affect consumers' disposition behavior, such as residual value (Okada 2001; 2006), emotional attachment (Beggan 1992; Fournier 1998; Jacoby et al. 1977) and status quo bias (Grewal et al. 2004). According to the adoption, replacement, and disposition literature, most researchers treat new product adoption and old product disposition as one time shooting, which indicates that the acceptance of new products also means the rejection of old products. Nevertheless, in real life, consumer may buy new product while still keep the old product. This may implies that new product acceptance and old product rejection are not necessarily equivalent to consumers. To explain consumers' ownership of more than one product in a category, we believe that the new product adoption and the old product disposition should be served as two separate concepts. Furthermore, basing on the readiness

theory, we propose that there should exist two kinds of readiness which we named “consumer readiness to accept new product” and “consumer readiness to reject old product”.

In order to fully realize consumers’ product ownership, we construct a model which combines both perspectives of new product adoption and old product disposition. According to relative literature, we explore the important antecedent of new product buying intentions and old product disposition intentions. We further induct the concept of new product acceptance readiness and old product reject readiness, and clarify the role of the two readinesses in explaining consumers’ product ownership. Our study can provide two theoretical contributions: (1) the combination of new product adoption and old product disposition, which previous research discuss them separately; and (2) the proposition of the concept of consumer readiness to reject old product, which early studies only suggest the existence of readiness to accept. Managerial implications can also be derived from our study which can help marketing practitioners with better understanding of consumers’ decision process and developing more appropriate tactic for new product launching project.

2. Literature Review

2.1 New Product Adoption and Concept of Readiness

As technology is penetrated into several aspects of life, technology-related products and services are becoming inevitable (Meuter et al. 2005). To catch up with the global trend, companies keep introducing new products and services that fulfill consumers' evolving needs. Observing the importance, research on the determinants of innovation (new products and self-service technologies (SSTs)) adoption has gone on for decades. Research examines consumers' perception of innovation characteristics includes diffusion of innovations (Rogers 1995), perceived innovation attributes as predictors of innovativeness (Ostlund 1974), technology acceptance model (Davis 1989), and price related studies (Kalyanaram and Winer 1995; Monroe 1990; Thaler 1985; Winer 1988). According to Rogers (1995), new product adoption can be explained by relative advantage, compatibility, complexity, triability, observability. Ostlund (1974) identify perceived risks to affect adoption behavior. In information system domain, perceived ease of use and perceived usefulness are critical variables driving new technology acceptance (Davis 1989). Technology readiness (TR) (Parasuraman 2000) that refers to people's tendency to use new technologies is identified to affect new product adoption.

Extant literature of technology readiness mostly emphasizes its effect on SSTs adoption, but why consumers decide to try SSTs and why some SSTs are more widely accepted than others are relatively unexplored (Meuter et al. 2005). In today's service settings, customer may have a choice between interpersonal and SSTs options. While traditional face-to-face service is mostly provided by an employee, adopting SSTs require customers to coproduce the service; hence, additional behaviors are needed. Discovering the similarities between SSTs adoption and innovation adoption,

Recently, Meuter et al. (2005) investigate the relationships between established adoption variables (innovation characteristics and individual differences) and consumer trial of SSTs. They discover that role clarity (whether consumers are clear about their role in using the SSTs), motivation (are they sufficiently motivated to produce a service independently), and ability (do they have the required skills and confidence to perform the task) mediate the established adoption variables and trial. These variables are theorized as “consumer readiness”, which is found to be a better predictor of SSTs trial than innovation characteristics and individual difference. Whether consumers are ready may largely determine their SSTs adoption behavior.

2.2 Important Antecedents of New Product Adoption

2.2.1 Price Fairness

When consider buying something, price is a critical factor taken into account. One aspect of price that drives purchase decisions is price fairness (Maxwell 2002). Consumers’ perception of a fair price has been recognized as a determinant of consumers’ willingness to purchase (Kahneman et al., 1986a; 1986b; Kalapurakal et al., 1991; Winer, 1986).

2.2.2 Subjective Norm

Social factors are also documented to affect adoption behavior. Subjective norm is one of them. Normative influence has identified to affect people’s technology adoption behavior (Davis 1989; Ajzen 1991; Moore and Benbasat 1991’ Thompson et al. 1991; Venkatesh et al. 2003). These researchers theorize subjective norm as “the degree to which an individual perceives that important others believe he or she should use the new system”, which is originally advanced in the theory of reasoned action (TRA) (Ajzen and Fishbein 1980). In product adoption domain,

products that fulfill the view of social norm assist consumers to achieve desired social goals by providing them with the characteristics they believe they lack (Grewal et al. 2004). In our research, we adapt the definition of subjective norm as “the degree to which an individual perceives that important others believe he or she should buy the new product”.

2.2.3 Technology Readiness

The development of new technology and new product has benefited consumers. Some new products are penetrating the market at a fast speed. But some don't. Companies are beginning to aware that some consumers choose to neglect, reject, or postpone their adoption of these products or services (Mick and Fournier 1998). Observing the challenges and frustration consumer encounters with new technologies, Parasuraman (2000) identify the role of technology readiness (people's trait, generalized beliefs, and affects) in technology-based product acceptance. The researcher defines technology readiness (TR) as people's propensity to embrace and use new technologies for accomplishing goals in home life and at work.

TR comprises four constructs: innovativeness (tendency to be a technology pioneer and thought leader), optimism (positive view about technology), discomfort (feeling of being overwhelmed by technology), and insecurity (distrust of technology). Parasuraman (2000) suggests that TR is positively related to consumer's acceptance of technology-based products or services. Following the concept, other researchers offer supporting results that TR positively affect people's SSTs adoption intention (Lin and Hsieh 2006; Lin et al. 2007; Walzuch et al. 2007). To be in line with practice, Parasuraman and Colby (2001) develop an empirically derived taxonomy of consumers, based on their level of TR. Consumers with different levels of TR may exhibit different SST adoption behavior. Other researchers replicate the taxonomy

with a U.K. sample (Tsikriktsis 2004) and a Turkish sample (Demirci and Ersoy, 2008). Massey et al. (2007) identify that TR customer segments vary in usability requirements of SSTs.

Aside from some research's view of TR as a higher order construct that reflects on innovativeness, optimism, discomfort, and insecurity (Lin et al. 2007) or TR as a whole drive adoption behavior (Lin and Hsieh 2006), Lam et al. (2008) examine the effect of the four TR constructs separately on adoption behavior. Their result indicates that innovativeness and optimism positively influence adoption behavior. Insecurity negatively affects adoption behavior.

2.3 Old Product Disposition and Important Antecedents

2.3.1 Effect of Old Product on New Product Adoption

Prior research on new product adoption not only centers on new product itself but also recognizes the influence of old products which are owned by consumers. “Consumer behavior can be viewed as the acquisition, consumption, and disposition of goods, services, time and ideas by decision making units (Jacoby 1976).” Owing to the importance of new product adoption, extant literature focuses attention on acquisition, actual usage, or consumption (Jacoby et al. 1977). To buy new products, consumers have to deal with the existing product they have. If old product is still functional, old product may be the obstacle to accept new product (Jacoby, et al. 1977; Okada 2006). Observing the effect of old product on new product adoption, a stream of research investigates disposition behavior of consumer durable goods (Barry 1991; Burke et al. 1978; Debell and Dardis 1979; Jacoby et al. 1977).

Prior literature of product disposition examines the factors that drive consumers' disposition choices (Debell and Dardis 1979; Jacoby et al. 1977),

consumers segments and related disposition behaviors (Burke, Conn, and Lutz 1978), and disposition process (Hanson 1980). Owing to various conditions of old products, Jacoby et al. (1977) develop a conceptual model of major disposition choices (e.g., keep the product, abandon it, give it away, sell it, trade-in). Burke et al. (1978) examine demographic, lifestyle, and psychological variables to identify consumer segments and related the segments to various disposition behaviors. Debell and Dardis (1979) concentrate on the impact of product-related factors on disposition decision. Hanson (1980) presents a model of disposition process (problem recognition, search and evaluation, disposition decision, and post disposition outcome) and brings together the factors that influence the disposition process and decision.

Product-related factors that lead to disposition such as performance or technological obsolescence (Debell and Dardis 1979) and product that no longer corresponds to one's self-image could be the underlying reasons for disposition (Belk 1988; Jacoby et al. 1977). When consider whether to dispose of certain product, consumers may take several factors into account, such as residual value, emotional attachment, and the status quo.

2.3.2 Residual Value

Residual value of the product is one of the major determinants in considering product disposition. Residual value refers to the “mental book value” from the mental accounting's perspective. It is the positive difference between the initial purchase price and the cumulative enjoyment (Okada 2001). Good and frequent usage experiences will lead to lower residual value. If the residual value is low, consumers are more likely to dispose of the product. On the contrary, if the residual value is high, consumers are less likely to dispose of the product.

2.3.3 Emotional Attachment

Emotional attachment is the emotional bond linking an individual with a consumption entity (e.g., brand, person, place, or object) (Park and MacInnis 2006). Emotional attachment is negatively related to product disposition (Beggan 1992; Fournier 1998; Jacoby et al. 1977). Beggan (1992) suggest that consumer builds a strong emotional attachment to products that are connected to central personal values, and emotional attachment decreases the willingness to replace a currently owned possession with a new one. Research has also indicated that emotional attachment to the old technology and to traditional products (e.g., How will I feel if I forgo the old?), can be a barrier to new product adoption (Fournier 1998). In addition, persons highly involved (in a sentimental or emotional sense) with a product will be more likely to keep it than will other people (Jacoby et al. 1977). Consumers are more reluctant to give up items when they are more attached to the items (Ariely et al. 2005). Reluctance to give up items increases as consumer's attachment to the item increases.

2.3.4 Status Quo Bias

To maintain the status quo is human nature. Samuelson and Zeckhauser (1988) introduce the concept "status quo bias" as a preference for the current state that biases people's choices. That is, people tend to do nothing or maintain their current or prior decision. Similarly, in product ownership situation, to maintain the status quo, consumers may be less likely to dispose of their original product. The status quo effect and the mere ownership effect suggest that consumers are often reluctant to abandon currently owned durables in favor of newer and potentially superior models (Grewal et al. 2004).

3. Research Model and Hypotheses

3.1 Operation Definition and Measurement of Research Constructs

Consistent with the new product adoption literature (Alexander, et al. 2008; Castaño et al. 2008; Herzenstein et al. 2007) we refer to new product adoption as buying a new product (e.g., a brand-new cell phone). In old product disposition research (Harrell and Mcconocha 1992; Jacoby et al. 1977), disposition alternatives include keeping, selling, giving out, throwing away, etc. In our research, we discuss selling old product only.

3.1.1. Consumer Readiness to Accept New Product

New products are emerging at a fast speed and always provide consumers with new functions and technologies. Nevertheless, regardless of these potential advantages, some consumers choose to neglect, reject, or postpone their adoption of new products or services (Mick and Fournier 1998). Prior research has documented several antecedents of new product adoption. But the questions of when and why consumer accept or not accept new product are relatively unexplored. Whether consumers are ready for the new product or not may critically affect their adoption intention.

Extant literature pertaining to people's readiness mostly focus on SSTs adoption. Relatively little has looked into people's readiness toward new product. To fill up the research void, we advance the concept "consumer readiness to accept new product" (RA), which is adapted from "consumer readiness" (Meuter et al. 2005). Consumer readiness to accept new product refers to a condition or state in which a consumer is prepared to buy the new product (people's propensity to buy new product), that consists of motivation and ability. Motivation refers to a desire to buy

the new product and ability reflects required capability and confidence to use the new product. Consumer readiness to accept new product is positioned as the mediators between the antecedents of new product adoption and consumer's adoption intention.

Motivation: When the old product is still functional, buying new product may be unnecessary. To buy new product, consumer must be adequately motivated to do so. Consumer motivations stir, push, or prod one to take action (Fitzmaurice 2005). Davis et al. (1992) suggest that people expend effort to adopt new technologies (computer by the time) due to both intrinsic and extrinsic motivation. Intrinsic motivation refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation refers to doing something because it is perceived to be instrumental in achieving valued outcomes (Ryan and Deci 2000). Meuter et al. (2005) also identifies the importance of intrinsic and extrinsic motivation in trying SSTs. Similar to adopting new technology, adopting new product requires consumers to be sufficiently motivated to do it. In our research, motivation to buy new product refers to the extrinsic motivation of doing the action, which is instrumental and desirable to consumer. Hence, we posit that motivation to buy new product has a significant, direct effect on buying intention. In the survey instrument, four items adapted from Meuter et al. (2005).

Ability: SSTs to people who never used before are relatively new technologies. Meuter et al. (2005) find that before trying SSTs, people would evaluate whether they are capable of and how confident they are in using the technologies. Higher ability is thus identified to drive SSTs trial. Similarly, new product may contain new technologies or new functions. To properly use the new product, necessary capability is required. Hence, we expect that whether people have the ability to use

the new product may largely affect their buying intention. In the survey, three items adapted from Meuter et al. (2005).

3.1.2 Consumer Readiness to Reject Old Product

Extant literature of new product adoption or old product disposition mainly regards new product adoption and old product disposition as unidimensional (replacement purchase) or views the old product as a reference point to compare new product. However, in reality, adopting new product does not necessarily lead to disposing of old product. Scarce research digs into this field. When will consumer buy new product and still keep the old product in use are left unsolved. To clarify the myth, we introduce the concept- consumer readiness to reject old product (RR), which refers to a condition or state in which a person is prepared to dispose of the old product. Notably, consumer readiness to reject old product is distinguished from consumer readiness to accept new product. Consumer readiness to reject old product also consists of motivation and ability but are different from that of consumer readiness to accept new product.

Motivation: To dispose of old product that is still functional, consumer must be adequately motivated to do so. When the product no longer fits in with the environment or corresponds to the owner's preferences or self-image (Jacoby et al. 1977), it provides sufficient motivation to dispose of it. Without enough motivation to dispose of old product, it is unlikely that a person will take action. Thus, we expect that motivation to dispose of old product have a significant, direct effect on selling intention. In the survey, four items created for the context.

Ability: To dispose of the old product, consumers may require knowledge about how to dispose of it and the ability to sell it. This ability reflects on people's resource and related experience they have. For instance, some people are more experienced in online auction. Some people are used to sell the unwanted product to second-hand stores. Others seldom or never sell unwanted product. We posit that whether people are capable of and confident in selling the product will drive their selling intention. That is, we expect to identify a significant and direct relationship between ability and selling intention. In the survey, four items created for the context.

3.2 Research Hypotheses

3.2.1 Antecedents Variables as Predictors of Consumer Readiness

To assess the mediation effect of consumer readiness to accept new product and consumer readiness to reject old product, antecedent variables should have direct effect on consumer readiness variable. We delve into two sets of antecedent variables: antecedents of new product adoption and antecedents of old product disposition.

Antecedents of New Product Adoption: The antecedents of new product adoption explored are price fairness (4 items adapted from Stone and Gronhaug [1993]), subjective norm (4 items adapted from Stone and Gronhaug [1993] and Venkatesh and Davis [2000]), innovativeness, discomfort, optimism, and insecurity (15 items of 4 TR constructs adapted from Parasuraman [2000]). These factors are widely tested in new product/technology adoption research. We suppose that price fairness, subjective norm, innovativeness, and optimism positively affect consumer readiness to accept new product. Discomfort and insecurity are expected to negatively affect consumer readiness to accept new product.

Antecedents of Old Product Disposition: Factors that drive disposition decision been explored are residual value, emotional attachment, and status quo bias. These factors are widely considered in disposition or trade-in literature. We expect that residual value (3 items created for the context), emotional attachment (4 items adapted from Sivadas and Venkatesh [1995] and Schifferstein and Zwartkruis-Pelgrim [2008]), and status quo bias (3 items created for the context) all have negative effect on consumer readiness to reject old product.

Mediation Hypotheses of Consumer Readiness Variables: Based on the conceptualization of the research model, the literature reviewed, and the important relationships examined in prior part, we propose the following two mediating hypotheses:

H_{1a}: Motivation to buy the new product and ability to use the new product mediate the relationship between antecedents of new product adoption and buying intention.

H_{1b}: Motivation to sell old product and ability to dispose of the old product mediate the relationship between antecedents of old product disposition and selling intention.

3.2.2. The Effect of RA and RR on Buying and Selling Intention

In our proposed model, we expect that consumer readiness to accept new product has a direct and significant effect on consumer's buying intention and consumer readiness to reject old product has a direct and significant effect on consumer's selling intention. In reality, whether consumers are ready to accept new product may also affect their selling intention. Similarly, if consumers are more ready to sell their old product, they may be more prone to buy new product. We expect these effects to exist, but these effects will be smaller than the main effect. Hence, we propose the following hypotheses:

H_{2a}: Consumer readiness to accept new product has a greater effect on buying intention than consumer readiness to reject old product.

H_{2b}: Consumer readiness to reject old product has a greater effect on selling intention than consumer readiness to accept new product.

Based on the discussion and the hypotheses, we propose a model combine both adoption and disposition aspect. The model is shown in Figure 1. The left part of the model is the antecedents of new product adoption and old product disposition. The middle part is the consumer readiness to accept variables and consumer readiness to reject variables. The right part shows consumers' buying, selling, and product ownership intention. All variable are viewed as latent variable except product ownership. Product ownership is operated as a discrete variable.



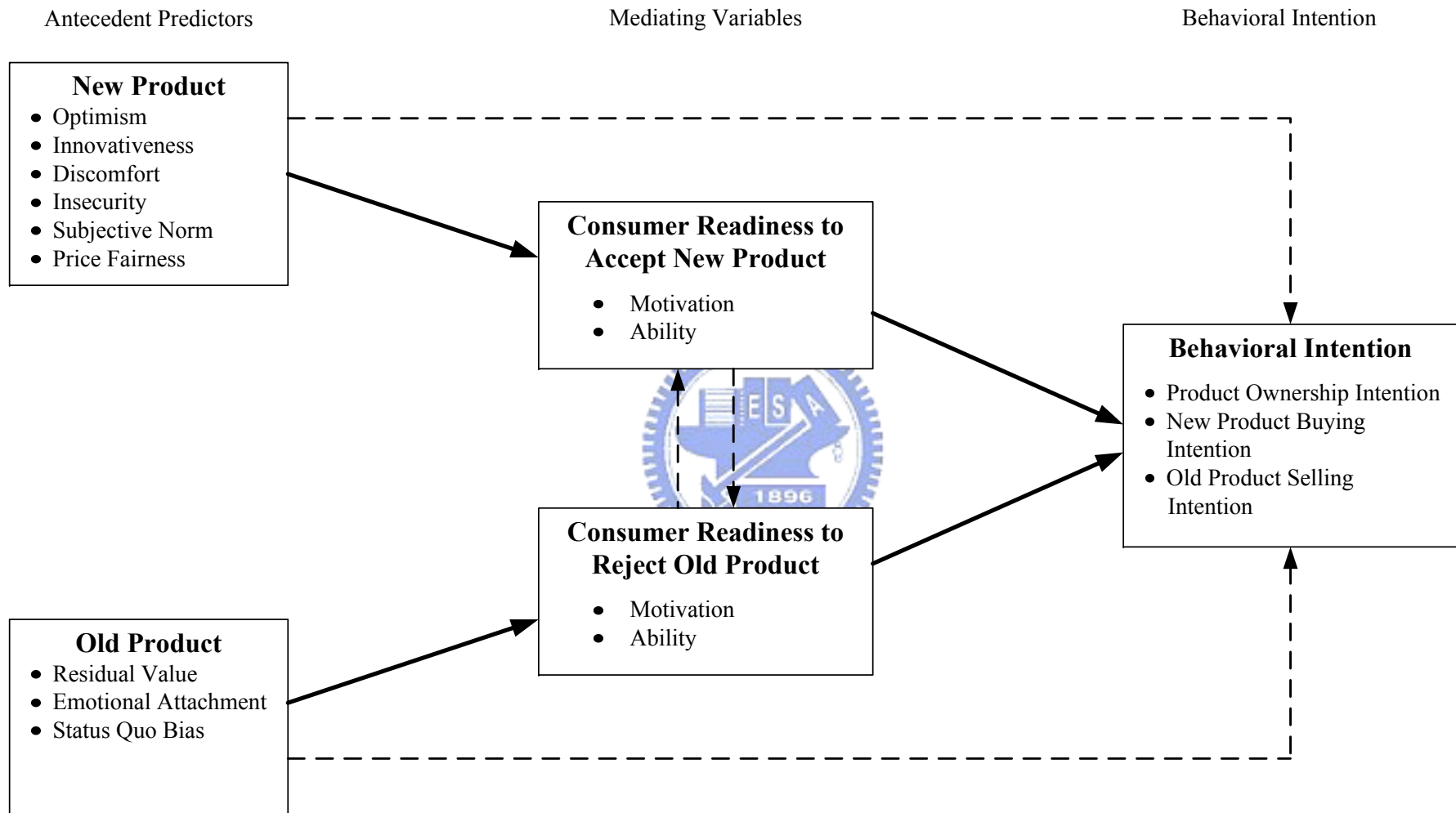


Figure 1 The Conceptual Model

3.3 Research Methodology

To test the conceptual model, we conduct an empirical study. Mobile phones are the subject of study. Data are collected through survey instrument. A self-administered survey was developed to explore the variables in the conceptual model. The development of the survey instrument undergoes a multi-round modification. First, relevant research is reviewed for getting established scales. Suitable items are then adjusted to fit in into the study. After the initial survey instrument is finished, it was reviewed by 4 professionals. Some modifications are made accordingly. A pretest was then conducted for the purpose of reliability analysis and exploratory factor analysis (EFA). Through the modification process, equivocal items were clarified or excluded. In the final survey, 57 items are designed to measure the latent variables. All the items use a 7-point Likert Scale ranking from 7 (strongly agree) to 1 (Strongly disagree). The final survey instrument is in the Appendix.

Mobile phones are chosen as the illustrative product for the following reasons. First, they are prevalent in Taiwan and are viewed as everyday technology. Second, most of the mobile phone users have the experience of repeat purchases of mobile phone. Thus, it is easier for subjects to respond to the questions. Third, among 3C products, it is more likely for people to own more than one mobile phone at a time. To examine whether people are ready to accept new product and/or ready to reject old product, there must be a new product to evaluate. A flier of a new mobile phone (named Navigator 1) with satellite navigation system is created. Satellite navigation system is included to investigate people's technology readiness toward the mobile phone.

4 Analyses and Results

4.1 Results of Pretest: Exploratory Factor Analysis

The pretest was conducted with a sample of 87 respondents. The EFA produces 13 factors with eigenvalues all greater than one. Reliability tests were examined. Cronbach's α ranking from 0.543 (residual value) to 0.925 (subjective norm). Most of the cronbach's α values are over 0.7, which implies good reliabilities of the constructs. The cumulated variance explained by the items is 80.56 percent. More detailed results are shown in Table 1.



Table 1 Results of Reliability Test

Component	1	2	3	4	5	6	7	8	9	10	11	12	13
PF1				.781									
PF2				.769									
PF3				.782									
PF4				.868									
SN1	.732												
SN2	.766												
SN3	.871												
SN4	.837												
INN1											.753		
INN2											.752		
INN3											.794		
DIS1										.732			
DIS2										.747			
DIS3										.819			
DIS4										.811			
OPT1							.834						
OPT2							.796						
OPT3							.764						
OPT4							.646						
INS1				.781									
INS2				.819									
INS3				.846									
INS4				.693									
RV1													.685
RV2													.815
RV3													.633
EA1			.891										
EA2			.897										
EA3			.808										
EA4			.759										
SQB1												.710	
SQB2												.756	
SQB3												.814	
MN1								.860					
MN2								.893					
MN3								.598					
MN4								.538					
ABN1						.843							
ABN2						.868							
ABN3						.793							
MO1									.773				
MO2									.867				
MO3									.672				
MO4									.667				
ABO1		.543											
ABO2		.857											
ABO3		.862											
ABO4		.762											
Eigenvalues	10.96	5.45	3.88	3.00	2.88	2.42	2.02	1.88	1.54	1.28	1.21	1.10	1.05
% variance	8.07	7.44	7.62	6.92	6.79	6.74	6.66	6.04	5.88	5.09	5.07	4.63	3.61
Cronbach's α	.925	.880	.903	.883	.850	.945	.897	.858	.819	.666	.920	.792	.543

PF: price fairness; SN: subjective norm, INN: innovativeness; DIS: discomfort; OPT: optimism; INS: insecurity; RV: residual value; EA: emotional Attachment; SQB: status quo bias; MN: motivation to buy new product; ABN: ability to use new product; MO: motivation to sell old product; ABO: ability to sell old product

4.2 Formal Investigation

4.2.1 Subjects and Data Structure

Respondents are first presented with a piece of new mobile phone ads. After reading the ads, they are instructed to do the self-administered survey. When they finish filling out the surveys, they are given a gift as a return of the favor. Subjects were randomly chosen. The data collection process lasts for 10 days. In total, 408 samples are collected, and 362 samples are used for analysis. Table 2 shows the information of the data structure. Of the sample, 49.2% were male and 50.8 % were female. Age of 20-29 stands for the highest portion (72.7%). 48.3 % are student and 31.2 % are office worker.

Table 2 Profile of the Respondents by Age, Gender, and Occupation

Characteristics	Number	Percent	Characteristics	Number	Percent
Age			Occupation		
19 and under	38	10.5%	Student	175	48.3%
20-29	264	72.9%	Professional	8	2.2%
30-39	45	12.4%	Army and Police	20	5.5%
40-49	10	2.8%	Office worker	113	31.2%
50-59	4	1.1%	Self-employed	7	1.9%
60 and above	1	0.3%	Housekeeper	3	0.8%
Gender			Others		
Male	178	49.2%		36	9.9%
Female	184	50.8%			

4.2.2 Reliability and Validity Analysis

We utilized a two-step modeling approach following Anderson and Gerbing (1988). The measurement model is tested by confirmatory factor analysis (CFA), and the quality of the measurement model is assessed on reliability, convergent validity, and discriminant validity. The level of internal consistency (reliability) in each variable is acceptable, with Cronbach's α score range from 0.745 (residual value) to 0.923 (ability to use new product) (see Table 3), indicating acceptable measurement reliabilities. Also, the composite reliability ranks from 0.742 (residual value) to 0.920 (selling intention). Hence, the results reflect the internal consistency of the indicator.



Table 3 The Property of CFA Results

Latent Variable		Standardized Factor Loadings	Cronbach's α	Composite Reliability	Average Variance Extracted
Price Fairness	PF1	0.786 ^{***}	0.899	0.903	0.701
	PF2	0.815 ^{***}			
	PF3	0.919 ^{***}			
	PF4	0.824 ^{***}			
Subjective Norm	SN1	0.794 ^{***}	0.911	0.916	0.732
	SN2	0.774 ^{***}			
	SN3	0.923 ^{***}			
	SN4	0.920 ^{***}			
Innovativeness	INN1	0.825 ^{***}	0.904	0.905	0.761
	INN2	0.890 ^{***}			
	INN3	0.900 ^{***}			
Discomfort	DIS1	0.437 ^{**}	0.863	0.879	0.661
	DIS2	0.898 ^{***}			
	DIS3	0.980 ^{***}			
	DIS4	0.828 ^{***}			
Optimism	OP1	0.853 ^{***}	0.899	0.902	0.698
	OP2	0.903 ^{***}			
	OP3	0.853 ^{***}			
	OP4	0.723 ^{***}			
Insecurity	INS1	0.602 ^{***}	0.809	0.817	0.531
	INS2	0.724 ^{***}			
	INS3	0.842 ^{***}			
	INS4	0.728 ^{***}			
Motivation New	MN1	0.682 ^{***}	0.754	0.778	0.476
	MN2	0.523 ^{***}			
	MN3	0.622 ^{***}			
	MN4	0.883 ^{***}			
Ability New	ABN1	0.846 ^{***}	0.923	0.907	0.766
	ABN2	0.920 ^{***}			
	ABN3	0.857 ^{***}			
Buying Intention	BI1	0.920 ^{***}	0.900	0.904	0.702
	BI2	0.842 ^{***}			
	BI3	0.843 ^{***}			
	BI4	0.737 ^{***}			
Residual Value	RV1	0.742 ^{***}	0.745	0.742	0.489
	RV2	0.702 ^{***}			
	RV3	0.652 ^{***}			
Emotional Attachment	EA1	0.876 ^{***}	0.887	0.889	0.669
	EA2	0.850 ^{***}			
	EA3	0.837 ^{***}			
	EA4	0.698 ^{***}			
Status Quo Bias	SQB1	0.734 ^{***}	0.816	0.819	0.602
	SQB2	0.758 ^{***}			
	SQB3	0.833 ^{***}			
Motivation Old	MO1	0.793 ^{***}	0.845	0.845	0.579
	MO2	0.835 ^{***}			
	MO3	0.728 ^{***}			
	MO4	0.678 ^{***}			
Ability Old	ABO1	0.533 ^{***}	0.855	0.863	0.620
	ABO2	0.776 ^{***}			
	ABO3	0.877 ^{***}			
	ABO4	0.907 ^{***}			
Selling Intention	SI1	0.834 ^{***}	0.918	0.920	0.699
	SI2	0.795 ^{***}			
	SI3	0.738 ^{***}			
	SI4	0.899 ^{***}			
	SI5	0.903 ^{***}			

*** denotes a significant value ($p < 0.001$)

The model fit indices are: $\chi^2 = 2645.1$, $df = 1345$, $NFI = 0.830$, $RFI = 0.811$, $IFI = 0.914$, $TLI = 0.904$, $CFI = 0.913$, and $RMSEA = 0.048$. The standardized factor loadings for the indicators of price fairness rank from 0.786 to 0.919, subjective norm rank from 0.774 to 0.923, innovativeness rank from 0.825 to 0.900, discomfort rank from 0.437 to 0.980, optimism rank from 0.723 to 0.903, insecurity rank from 0.602 to 0.842, motivation to buy new product rank from 0.523 to 0.833, ability to use new product rank from 0.846 to 0.920, buying intention rank from 0.737 to 0.920, residual value rank from 0.652 to 0.742, emotional attachment rank from 0.698 to 0.876, status quo bias rank from 0.734 to 0.833, motivation to sell old product rank from 0.678 to 0.835, ability to dispose of old product rank from 0.533 to 0.907, and selling intention rank from 0.738 to 0.903. Based on the good over fit and the proper factor loadings of the items, we conclude the measurement model have good convergent validity.

To evaluate discriminant validity, the Average Variance Extracted (AVE) is calculated (Table 3). AVE should be higher than the variances shared between the constructs (Fornell and Lacker 1981). Table 4 exhibits the correlation matrix of the constructs, which can be used for the comparison. The correlations between different constructs are in the off-diagonal elements of the matrix, and the square roots of AVE for each of the constructs are along the diagonal. According to the results, we infer that the constructs have adequate discriminant validity.

Table 4 Discriminant Validity

	PF	SN	IN	DIS	OP	INS	MN	ABN	BI	RV	EA	SQB	MO	ABO	SI
PF	0.837														
SN	0.579	0.856													
IN	0.303	0.291	0.872												
DIS	-0.135	-0.034	-0.237	0.813											
OP	0.241	0.358	0.526	-0.139	0.836										
INS	-0.135	-0.137	-0.175	0.406	-0.074	0.729									
MN	0.532	0.590	0.215	-0.051	0.354	-0.105	0.690								
ABN	0.382	0.343	0.406	-0.45	0.327	-0.286	0.389	0.875							
BI	0.683	0.774	0.359	-0.042	0.319	-0.152	0.666	0.415	0.838						
RV	-0.085	-0.187	-0.03	0.019	-0.278	-0.029	-0.225	-0.149	-0.22	0.774					
EA	0.138	0.072	0.149	0.032	0.039	0.108	0.104	0.014	0.12	-0.012	0.818				
SQB	-0.151	-0.148	-0.158	0.342	-0.136	0.211	-0.019	-0.185	-0.129	0.072	0.101	0.776			
MO	0.088	0.146	0.102	0.012	0.202	-0.064	0.187	0.082	0.144	-0.84	-0.062	-0.016	0.761		
ABO	0.207	0.13	0.336	-0.051	0.254	-0.005	0.042	0.218	0.118	0.107	0.072	-0.132	-0.140	0.787	
SI	0.136	0.263	0.263	0.03	0.292	-0.041	0.230	0.192	0.232	-0.271	-0.384	-0.134	0.325	0.413	0.836

PF: Price Fairness; SN: Subjective Norm; INN: Innovativeness; DIS: Discomfort; OPT: Optimism; INS: Insecurity; MN: Motivation to Buy New Product; ABN: Ability to use New Product; BI: Buying Intention; RV: Residual Value; EA: Emotional Attachment; MO: Motivation to Dispose Old Product; ABO: Ability to Dispose of Old Product; SI: Selling Intention. The **bold** numbers on the diagonal are the square roots of the AVE. Off-diagonal elements are correlations among constructs.

4.3 Hypotheses Test

We use a two step process to test mediation. The first step ensures the antecedent has a significant effect on intention. In the second step, we examine whether the antecedent has a direct effect on mediator, whether the mediator has an effect on intention, and whether the antecedent has an effect on intention. In the second step, the influence of antecedent on intention must be lessened when the mediator are included in the model. That is, the effect of antecedent on intention in step 2 should be less than that of step 1 (b must be smaller than a in Figure 2).

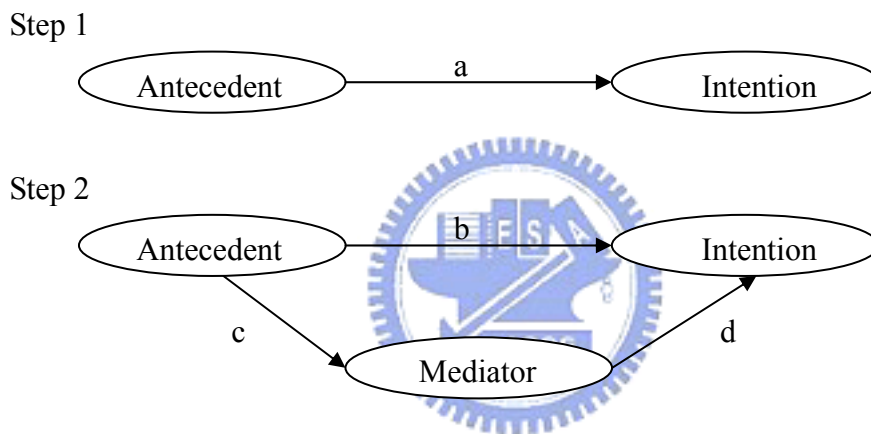


Figure 2 Steps for Mediation Test

4.3.1 Results of the Mediation Effect

The results of the mediation test are summarized in Table 5, showing the comparison of the effect of antecedents on intention with (value in column 3) and without mediator (value in column 5). Compare the value in column 3 and column 5, we discover that the effects of price fairness, subjective norm, and innovativeness on buying intention are partially mediated by motivation to buy new product and ability to use new product. The effect of optimism on buying intention is fully mediated by motivation to buy new product and partially mediated by ability to use new product. The effect of insecurity on buying intention is partially mediated by ability to use

new product. Motivation does not mediate discomfort and insecurity on new product buying. Discomfort fails to have a significant effect on buying intention and insecurity does not affect motivation to buy new product. Hence, the result partially supports H1_a.

For consumer readiness to reject old product variables, motivation to dispose of old product partially mediates the effect of residual value on selling intention. Motivation to dispose of old product does not mediate the effect of emotional attachment and status quo bias because of their non-significant effect on motivation. Ability to dispose of the old product partially mediates the effect of residual value and fully mediates the effect of status quo bias on selling intention. Still, ability does not mediate between the relationship of emotional attachment and selling intention. The results partially support H1_b.

4.3.2 Effect of RA and RR on New Product Buying and Old Product Selling

To examine whether RA are dominating RR in affecting buying intention and whether RR are more influential in selling intention than RA, we run a SEM model to test the effect. The result (Table 6) indicates that buying intention is majorly affected by RA but not RR (MO-BI, ABO-BI not significant). Also, RR has a more significant effect on selling intention than RA. Although motivation to accept new product has a significant effect on selling intention, the effect of readiness to reject variables are still greater than it. Accordingly, H2_a and H2_b are supported.

Table 5 Result of Mediation Effect Analysis

Predictor	ANT→INT (step1)	ANT→MED (step2)	MED→INT (step2)	ANT→INT (step2)	Conclusion
<i>Description of Test: Motivation to buy the new product as a mediator of the relationship between new product adoption antecedents and buying intention</i>					
PF	0.587 (0.001)	0.339 (0.001)	0.726 (0.001)	0.299 (0.001)	Partial Mediation
SN	0.639 (0.001)	0.428 (0.001)	0.624 (0.001)	0.374 (0.001)	Partial Mediation
INN	0.269 (0.001)	0.140 (0.001)	0.872 (0.001)	0.150 (0.001)	Partial Mediation
DIS	-0.038 (0.510)	---	---	---	No Mediation
OPT	0.354 (0.001)	0.358 (0.001)	0.893 (0.001)	0.037 (0.470)	Total Mediation
INS	-0.181 (0.014)	-0.111 (0.102)	0.909 (0.001)	-0.081 (0.123)	No Mediation

*Description of Test: **Ability** to use new product as a mediator of the relationship between new product adoption antecedents and buying intention*

PF	0.587 (0.001)	0.346 (0.001)	0.168 (0.001)	0.527 (0.001)	Partial Mediation
SN	0.639 (0.001)	0.296 (0.001)	0.156 (0.001)	0.591 (0.001)	Partial Mediation
INN	0.269 (0.001)	0.332 (0.001)	0.290 (0.001)	0.174 (0.001)	Partial Mediation
DIS	-0.038 (0.510)	-0.501 (0.001)	0.444 (0.001)	0.183 (0.001)	Partial Mediation
OPT	0.354 (0.001)	0.389 (0.001)	0.310 (0.001)	0.233 (0.001)	Partial Mediation
INS	-0.181 (0.014)	-0.362 (0.001)	0.363 (0.001)	-0.047 (0.505)	Total Mediation

*Description of Test: **Motivation** to dispose of old product as a mediator between old product disposition antecedents and selling intention*

RV	-0.334 (0.001)	-0.714 (0.001)	0.444 (0.048)	-0.017 (0.933)	Total Mediation
EA	-0.514 (0.001)	-0.066 (0.254)	0.430 (0.001)	-0.486 (0.001)	No Mediation
SQB	-0.157 (0.025)	-0.016 (0.754)	0.462 (0.001)	-0.150 (0.024)	No Mediation

*Description of Test: **Ability** to dispose of old product as a mediator between old product disposition antecedents and Selling intention*

RV	-0.334 (0.001)	0.159 (0.081)	0.455 (0.001)	-0.403 (0.001)	Partial Mediation
EA	-0.514 (0.001)	0.092 (0.232)	0.452 (0.001)	-0.557 (0.001)	No Mediation
SQB	-0.157 (0.025)	-0.154 (0.029)	0.412 (0.001)	-0.093 (0.156)	Total Mediation

Notes: The numbers shown are maximum likelihood parameter estimates, and *p*-values are shown in the parentheses. ANT: antecedents; INT: intention; MED: mediator; PF: price fairness; SN: subjective norm, INN: innovativeness; DIS: discomfort; OPT: optimism; INS: insecurity; RV: residual value; EA: emotional Attachment; SQB: status quo bias

Table 6 Standardized Total Effect of RA and RR on Intention

	Causal Relationship	Path Coefficient (<i>p</i> -value)
Consumer Readiness to Accept New Product	Motivation to New Product→ Buying Intention	0.778 (0.001)
	Ability to Use the New Product→ Buying Intention	0.098 (0.034)
Consumer Readiness to Reject Old Product	Motivation to Old Product→ Buying Intention	0.002 (0.958)
	Ability to Dispose of Old Product→ Buying Intention	0.064 (0.124)
Consumer Readiness to Accept New Product	Motivation to New Product→ Selling Intention	0.141 (0.013)
	Ability to Use the New Product→ Selling Intention	0.005 (0.933)
Consumer Readiness to Reject Old Product	Motivation to Old Product→ Selling Intention	0.366 (0.001)
	Ability to Dispose of Old Product→ Selling Intention	0.459 (0.001)

After we realize the effect of RA and RR on buying intention and selling intention, we run a correlation test to examine whether they are distinct constructs. The correlation of RA and RR is 0.016 (using a two order concept). The low correlation supports our conceptualization that RA and RR are two separate constructs.

4.3.3 The Impact of Readiness on the Choice of Four Actions

To gain more insight from the data, we analyze the results using ANOVA to determine whether people with different level of RA and RR have different intentions. In the analysis, we use mean score of readiness to split the data. We categorize people into four groups with high RA high RR (group 1), low RA high RR (group 2), low RA low RR (group 3), and high RA low RR (group4).

Mean score of buying intention for the four groups are 4.32, 2.91, 2.91, and 3.97 (see Figure 3). Result shows that there are significant differences between group 1 and 2($p < 0.001$) and group 1 and 3 ($p < 0.001$). Group 1 and 4 (0.159) and Group 2 and 3 (1.000) are not significantly different. The result further supports our conceptualization that people with higher readiness to accept (group 1 and 4) have a higher buying intention.

Mean scores for selling intention are 4.38, 3.97, 2.90, and 3.26 for group 1, 2, 3, and 4 respectively (see Figure 3). The p-value between groups are 0.156 (1 and 2), $p < 0.001$ (1 and 3), $p < 0.001$ (1 and 4), $p < 0.001$ (2 and 3), 0.006 (2 and 4), and 0.298 (3 and 4). The significant differences show that people with higher readiness to reject old product have a higher selling intention.

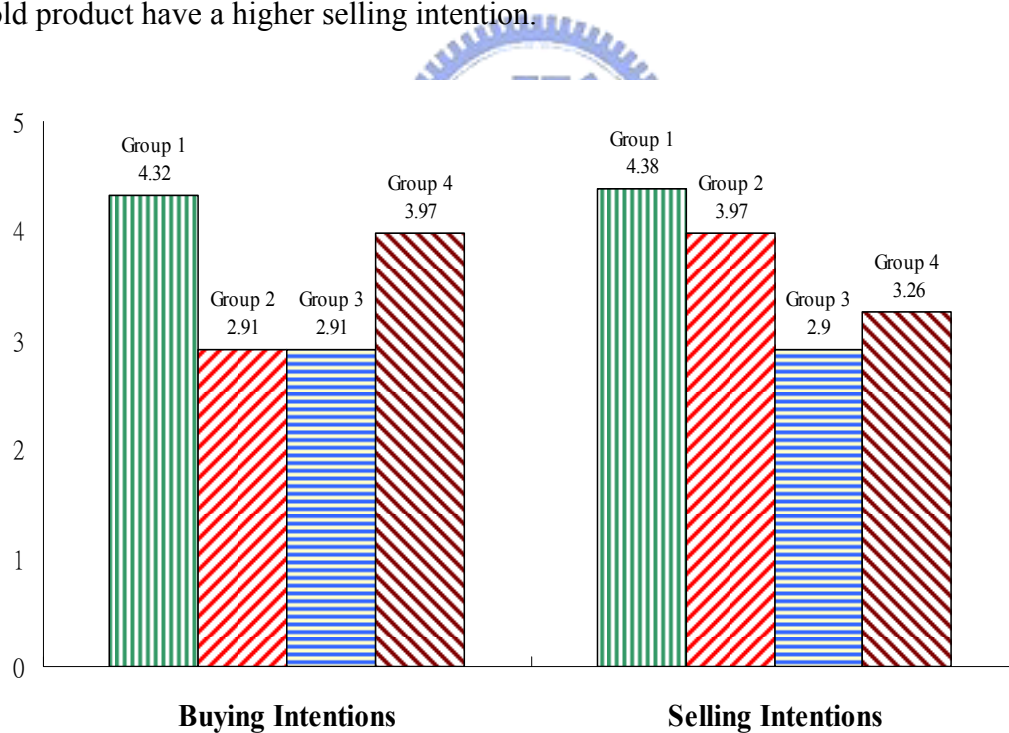


Figure 3 Mean of Buying and Selling Intention among Groups

After confirm the effect of RA on buying intention and RR on selling intention separately, we then include both RA and RR's effect on people's ownership intention. Tests of homogeneity of proportion are run to determine if there are differences among groups in choosing the four actions. Action 1 is replacement purchase: buying Navigator 1 and selling their mobile phone. Action 2 is to defer choice: want to buy new mobile phone but not Navigator 1, hence looking for another new mobile phone. Action 3 stands for keep using their old mobile phone. Action 4 is collector: buying Navigator 1 and keeping the old mobile phone (for more detail, please refer to the survey instrument in the Appendix). The result shows that people in group 1 choose action 1 the most compare to other groups. Other groups have similar result (please refer to Figure 4-7).



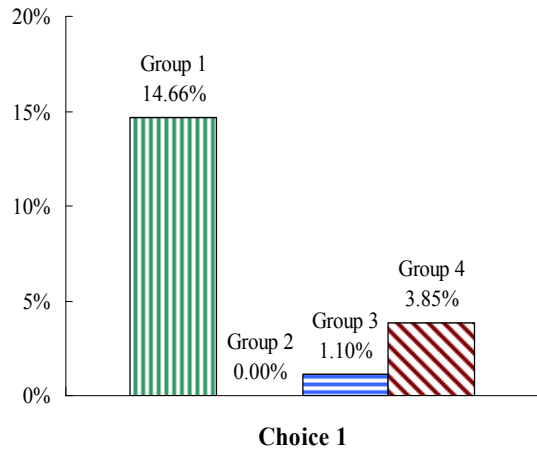


Figure 4 The Result of Choice 1

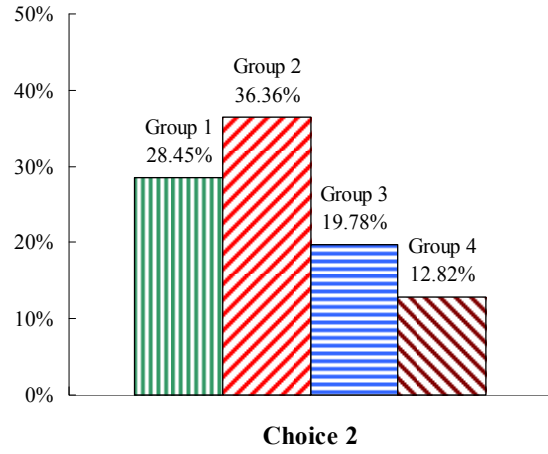


Figure 5 The Result of Choice 2

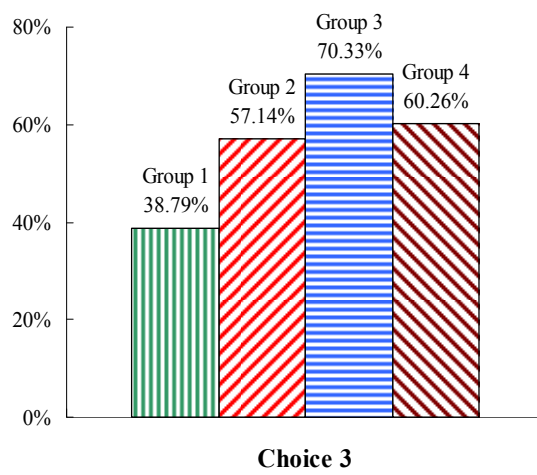


Figure 6 The Result of Choice 3

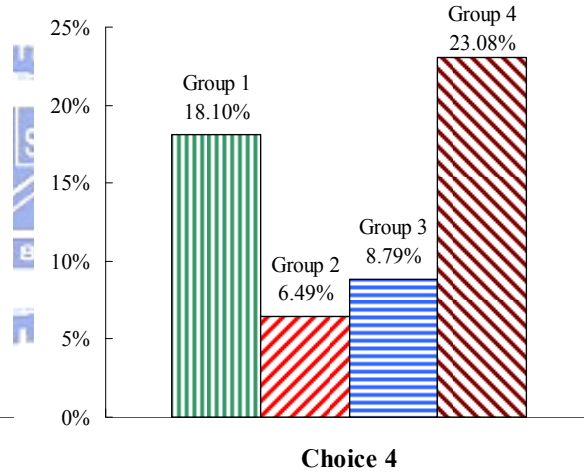


Figure 7 The Result of Choice 4

6 Discussion and Implication

6.1 Discussion

According to our research model, we explore important antecedent of new product adoption (price fairness, subjective norm, innovativeness, discomfort, optimism, and insecurity) and antecedents of old product disposition (residual value, emotional attachment, and status quo bias). The effect of these antecedents is mediated by RA (H1_a) and RR (H1_b), which are proposed by our study. Furthermore, RA is found to have greater effect on buying intention than RR (H2_a). RR is identified to be more pronounced in affecting selling intention than RA (H2_b).

RA is identified to be mediators between adoption antecedents and buying intention. Motivation to buy new product mediate 4 of the 6 antecedents except discomfort and insecurity. The result indicates that price fairness, subjective norm, innovativeness, and optimism positively affect consumers' motivation to buy new product. The motivation further increases buying intention. Ability to use new product mediate 5 of the 6 antecedents. The findings imply that innovativeness and optimism positively affect their ability to use new product. With higher ability to use the new product, consumers are more willing to buy new product. Insecurity's negatively affect their ability to use new product thus reduce consumer's buying intention.

RR mediates the relationship between disposition antecedents and old product selling intention. Motivation to sell old product mediate the effect of residual value. The result indicates that with higher residual value, consumers are less motivated to sell the product, hence reduce their selling intention. Ability to sell old product mediate 2 of the 3 antecedents: residual value and status quo bias. Interestingly,

higher residual value decreases people's motivation to sell the old product but increases people's ability in selling it. With higher residual value, consumers are more confident in selling old product (higher ability), thus increase their selling intention. In addition, people who are more status quo biased are more likely to keep their product instead of selling it. Hence reduce their experience (ability) in selling. This may further decrease people's selling intention.

For product ownership intention, the analysis shows convincing result. People with high RA and high RR (group 1) are more likely to choose buying new product and selling the old product than other group. People with low RA and high RR are more likely to choose action that is looking for other new product than other group. People with low RA and low RR are more pronounced in keep using the old product regardless of the new product. People with high RA and low RR tend to buy new product and keep the old product.

To sum up, the major contribution of the research is twofold. First, the conceptual model integrates both new product adoption and old product disposition. We look into how consumer readiness variables mediate between the relationships of antecedents and intention. The adding of the consumer readiness variable broadens our knowledge in consumers buying and selling decisions. Second, by differentiating consumer readiness to accept new product from consumer readiness to reject old product, we clarify that buying does not necessarily equivalent to selling. The clarification strengthens our knowledge in consumers' product ownership intention. Also, with the construction of RA and RR, we are capable of forecasting consumer buying and disposing intention simultaneously.

6.2 Managerial Implication

As Meuter et al. (2005) has mentioned, “For many firms, often the challenge is not managing the technology but rather getting consumers to try the technology.” Their findings provide companies with useful strategies in implementing SSTs or introducing new products. They focus on new product perspective, our research include both new product and old products’ effect. The inclusion of old product’s perspective could offer companies with a more thorough understanding of consumer’s attitude toward new product and their old product. By knowing the effect of RA and RR on buying and disposition intention, companies can apply tactical strategies to increase consumer’s motivation and ability in both readiesses.

To influence the actionable RA and RR variables, companies have several tactics can be implemented. First, companies can use new product trial to increase people’s readiness to accept new product. During the trial process, the advantages of the new product should be clearly demonstrated. This could further increase people’s motivation to buy new product. Also, employee could assist people to operate the new product (if needed) and try to increase their confidence in using the new product. By doing so, this may increase people’s ability. If trial does increase potential consumers’ motivation to buy and ability to use, they may be more willing to buy the new product.

Our research categorizes 4 groups of possible action (2 RA x 2 RR). Action 1 is replacement purchase. Action 4 is collector. Action 2 is to defer choice and action 3 is to use the old product. Action 1 and 4 are more appealing to the company. Hence, companies could use some marketing tactics to move people from action 2 and 3 to action 1 and 4. Management can encourage buying by increasing people’s readiness to accept variables. For action 2 consumer, company can provide other new models

and provide them with trade-in or other disposition alternatives. By doing this, company may move consumer from action 2(defer choice) to action 4 (replacement purchase). For people who think their old product still function well (action 3), companies can increase their motivation to buy new product and ability in using the new product by differentiating the new product from their old product and stress their product is easy to use. In addition, the company could inform their consumer that they do not have to dispose of their old product (retire or sell it). It is because of the two products are somehow different. By doing this, consumer may move from action 3 to action 4.

6.3 Limitations and Future Research

6.3.1 Limitations

In our research, respondents evaluate the new product (Navigator 1) based on the information offered in the flier rather than a real mobile phone. This may somehow affects people's evaluation toward the new product. Also, owing to limited time and budget, only one product category is examined. In the future, other product categories can be investigated to test the generalizability of the model.

6.3.2 Directions for Future Research

Building on the findings of our research, some directions are offered for future research. The conceptualization of readiness to accept and readiness to reject can be further investigated in the future. We expect that readiness to accept and readiness to reject are not confined to product only; services may be applicable as well. Owing to the benefits associated with the self-service technologies, several service industries have introduced SSTs to replace part of the traditional face-to-face service employee. This transformation may arouse some problems: when consumers are not ready to

accept SSTs and/or not ready to reject the old way, what would happen? The installation of SSTs sometimes left no other option for service delivery (Reinders, Dabholkar, and Frambach 2008). In other words, the transformation forces consumers to use SSTs. The strength of the force condition can be studied, which may provide interesting results. For instance, the strength of force may moderate the effect of readiness to accept new technologies on using intention. Similarly, the strength of force may also moderate the effect of readiness to reject old technology (traditional face-to-face service delivery) on the intention of not using the traditional way. That is, there may have an interaction effect.

In our research, with the separation of readiness to accept and readiness to reject, we categorize consumers' ownership intention into four groups. The action 2 and 4 are relatively interesting. Future research can investigate under what condition consumer will move from quadrant 2 to 1 or 4 and under what condition people will move from quadrant 3 to 1 and 4.

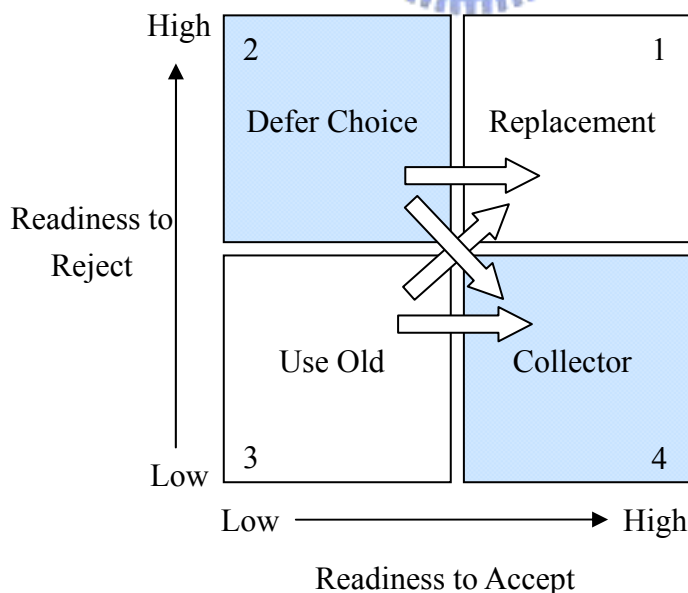


Figure 8 Four Actions of Ownership Intention

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Appendix 1 Survey

您好：

本問卷目的為調查消費者對於新、舊產品的看法，以及可能的消費行為。
您所填答的資料僅供學術之用，不會外流，非常感謝您的支持。

交通大學管理學院

中華民國九十八年五月

下面提供目前市面上各類手機（不同廠牌）大約價格的比較，請簡單的過目以助問卷填答。

	Sony-Ericsson	Nokia	Samsung	其他
初階手機（簡單撥打 發簡訊）	1500-3000 元	1200-2700 元	1500-3000 元	1000-2500 元
音樂手機	3000-6000 元	3000-5500 元	4000-7500 元	2000-5000 元
PDA 手機（500 萬畫素相機 全觸屏螢幕）	12000-20000 元	15000-20000 元	8000-20000 元	5000-10000 元
GPS 導航手機	7500-18000 元	8000-16000 元	9000-20000 元	4000-10000 元

最近，Navigator 公司推出新的 GPS 導航手機(Navigator 1)，廣告資訊如下：

Navigator GPS 導航手機（黑、白）

導航圖示



您還在為迷失方向而煩，為走錯路而惱嗎？
Navigator 1 將您種種煩惱化為驚喜，無論是開車還是步行，透過 3D 立體導航，Navigator 1 都將協助您到達想去的地方。

獨特的滑蓋外型設計 往上推 音樂跟著來
超大 2.6 吋 1670 萬色 彩色觸控螢幕
500 萬畫素自動對焦相機 可拍攝 2592 x 1944 pixels 相片

Navigator 1 採全觸控螢幕的設計，簡潔的操作介面，立即上手。導航功能強大，支援三維地圖顯示，提供直觀的方式給用戶。內置語音導航，按需求指引，透過簡單的標記功能，還可透過簡訊將地圖傳送給朋友分享。

Navigator 1 更強化了影音播放功能，以及內建 5 百萬畫素相機，可拍攝照片及動態影片。在容量上，除了內建的 160MB 外，Navigator 1 最高可擴充到 2GB 之記憶容量（microSD 記憶卡），是一隻功能齊全的智慧導航手機。

售價：10,000 元

第一部份是關於您對於 Navigator 1 的看法，請根據廣告的訊息，針對以下敘述，填寫您的同意程度(請打勾)：

	非常不同意	不同意	稍微不同意	普通	稍微同意	同意	非常同意
1. 我覺得這個價格是合理的	①	②	③	④	⑤	⑥	⑦
2. 這個價位會讓我想要擁有這隻手機	①	②	③	④	⑤	⑥	⑦
3. 我可以接受這個價位	①	②	③	④	⑤	⑥	⑦
4. 這個價格是吸引人的	①	②	③	④	⑤	⑥	⑦
5. 親朋好友可能會認為這個新手機與我的個人品味一致	①	②	③	④	⑤	⑥	⑦
6. 親朋好友會認為這隻手機可以為我的生活帶來幫助	①	②	③	④	⑤	⑥	⑦
7. 親朋好友應該會贊成我買這個新手機	①	②	③	④	⑤	⑥	⑦
8. 如果我買這隻新手機，親朋好友會認為這是個明智的選擇	①	②	③	④	⑤	⑥	⑦
9. 對我來說，操作這隻手機應該是簡單的	①	②	③	④	⑤	⑥	⑦
10. 學會使用這隻手機應該不需要花我太多的時間	①	②	③	④	⑤	⑥	⑦
11. 依過去使用手機的經驗，我有自信能順利地使用這隻手機	①	②	③	④	⑤	⑥	⑦
12. 這隻手機的外觀設計是吸引我的	①	②	③	④	⑤	⑥	⑦
13. 這手機的照相功能符合我的需求	①	②	③	④	⑤	⑥	⑦
14. 這隻手機的導航功能對我是有幫助的	①	②	③	④	⑤	⑥	⑦
15. 整體而言，我很喜歡這隻手機	①	②	③	④	⑤	⑥	⑦
16. 我願意買這隻手機	①	②	③	④	⑤	⑥	⑦
17. 即使現在缺貨，我也願意等一陣子	①	②	③	④	⑤	⑥	⑦
18. 未來如果有需要，我會優先考慮這隻手機	①	②	③	④	⑤	⑥	⑦
19. 我可能會在網路上向他人宣傳這隻手機	①	②	③	④	⑤	⑥	⑦

第二部份請您針對目前擁有手機的情況進行回答。

A1. 過去大約買過幾隻手機 (為自己或別人買): 1~3 隻 4~6 隻 7~9 隻 10 以上

A2. 您現在擁有手機數: 1 隻 2 隻 3 隻 4 隻以上

A3. 現在這隻手機已使用:

0~1 個月 2~6 個月 7~12 個月
 1 年~1 年半 1 年半以上

A4. 是否有導航功能: 是 否

A5. 您大約多久更換一次手機:

0~1 個月 2~6 個月 7~12 個月
 1 年~1 年半 1 年半以上

➤ 請根據您目前最常使用的手機，針對以下敘述，填寫您的同意程度：

	非常不同意	不同意	稍微不同意	普通	稍微同意	同意	非常同意
1. 我覺得這隻手機已經損耗的差不多了	①	②	③	④	⑤	⑥	⑦
2. 我的手機用到現在，已經回本了	①	②	③	④	⑤	⑥	⑦
3. 若要轉賣此手機，也不會有好價格	①	②	③	④	⑤	⑥	⑦
4. 這隻手機對我來說有紀念價值	①	②	③	④	⑤	⑥	⑦
5. 這隻手機對我來說有特殊的意義 (如：朋友送的、特別節日的禮物)	①	②	③	④	⑤	⑥	⑦
6. 這隻手機在我心中佔有一席之地	①	②	③	④	⑤	⑥	⑦
7. 對我來說，這隻手機不只是一個工具， 還有其他特別的意義	①	②	③	④	⑤	⑥	⑦
8. 我的手機有點老舊了	①	②	③	④	⑤	⑥	⑦
9. 我的手機已無法滿足我的需求	①	②	③	④	⑤	⑥	⑦
10. 這隻手機的功能已經落伍了	①	②	③	④	⑤	⑥	⑦

	非常不同意	不同意	稍微不同意	普通	稍微同意	同意	非常同意
11. 這隻手機已經差不多可以送人或丟掉	①	②	③	④	⑤	⑥	⑦
12. 我有親朋好友會願意接受我的舊手機	①	②	③	④	⑤	⑥	⑦
13. 根據過去的經驗，我覺得我有能力透過網路處理掉我的手機（賣掉或交換）	①	②	③	④	⑤	⑥	⑦
14. 市場上有許多管道可以賣掉我的手機	①	②	③	④	⑤	⑥	⑦
15. 整體而言，我覺得我有能力處理掉我的手機	①	②	③	④	⑤	⑥	⑦
16. 價格合理的話，我會賣掉我的手機	①	②	③	④	⑤	⑥	⑦
17. 如果情況允許，我會拿我的手機跟別人換東西	①	②	③	④	⑤	⑥	⑦
18. 如果電信公司（手機行）推出舊機換新機的打折活動，我會拿我的手機去折抵	①	②	③	④	⑤	⑥	⑦
19. 如果有機會，我會透過網拍賣掉我的手機	①	②	③	④	⑤	⑥	⑦
20. 整體而言，我願意賣掉我的手機	①	②	③	④	⑤	⑥	⑦

請針對 Navigator 1 的產品內容，及您目前擁有的手機情形，從下面四個針對新與舊手機處理方式的描述中，選擇一個您最可能採取的方式 (單選)：

- (A) 繼續使用舊手機：我不會買 Navigator 1，且將繼續使用現有的手機
- (B) 繼續尋找適合的手機：我想要換新手機，但不會買 Navigator 1，所以我會繼續尋找合適的手機
- (C) 新舊並存：我會買 Navigator 1，且會保留現有手機
- (D) 汰舊換新：我會買 Navigator 1，並適當地處理掉現有的手機(如：賣掉、送人)

單選：_____

手機從早期撥電話，接電話的功能，進步到可傳簡訊，新的功能不斷地推出，現階段手機所包含的新功能如：照相、手機可以上網、藍芽無線檔案傳輸（鈴聲、照片等）、藍芽無線耳機、看數位電視、3G手機還可看到對方的影像等。

第三部份是關於手機陸續推出的新功能整體看法，請針對以下敘述，填寫您的同意程度：

	非常不同意	不同意	稍微不同意	普通	稍微同意	同意	非常同意
1. 我常搜尋有關手機新功能的資訊	①	②	③	④	⑤	⑥	⑦
2. 我喜歡學習手機的新功能	①	②	③	④	⑤	⑥	⑦
3. 我常向朋友分享手機新功能的訊息	①	②	③	④	⑤	⑥	⑦
4. 我不大了解店員對於新功能的專業介紹	①	②	③	④	⑤	⑥	⑦
5. 學習使用新功能的過程有時候是煩人的	①	②	③	④	⑤	⑥	⑦
6. 使用新功能的步驟是很複雜的	①	②	③	④	⑤	⑥	⑦
7. 新功能在使用上通常是不方便的	①	②	③	④	⑤	⑥	⑦
8. 我認為手機的新功能可以讓我工作更有效率	①	②	③	④	⑤	⑥	⑦
9. 很多新功能可協助我完成我想要做的事	①	②	③	④	⑤	⑥	⑦
10. 手機的新功能讓我的行動更自由	①	②	③	④	⑤	⑥	⑦
11. 為了達到我的需求，我會使用新的手機功能	①	②	③	④	⑤	⑥	⑦
12. 高度依賴手機的新功能來處理事情是不保險的	①	②	③	④	⑤	⑥	⑦
13. 太快接受新推出的功能是有風險的 (容易故障或出問題)	①	②	③	④	⑤	⑥	⑦
14. 使用新功能的好處常常不如預期	①	②	③	④	⑤	⑥	⑦
15. 使用新功能有時會造成我的麻煩	①	②	③	④	⑤	⑥	⑦

第四部份關於平時的生活態度，請針對以下敘述，填寫您的同意程度：

	非常不同意	不同意	稍微不同意	普通	稍微同意	同意	非常同意
1. 我認為生活中不要有太多的變化會比較好	①	②	③	④	⑤	⑥	⑦
2. 改變既定的行程會對我造成困擾	①	②	③	④	⑤	⑥	⑦
3. 我不太願意改變現況	①	②	③	④	⑤	⑥	⑦

【個人基本資料】

D1.您的性別： 男 女

D2.您的年齡為： 19歲以下 20-29歲 30-39歲 40-49歲
 50-59歲 60歲以上

D3.您的職業為： 學生 教師 軍警 上班族
 自己開業 家管 其他

問卷到此結束，煩請您再檢查一次有無遺漏的地方。
 再次感謝您的支持，謝謝！

簡 歷



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學 歷：

民國98年6月 國立交通大學運輸科技與管理學系碩士班畢業

民國96年6月 國立交通大學運輸科技與管理學系畢業

民國92年6月 台北市立內湖高中畢業

民國89年6月 基隆市立中正國中畢業

民國86年6月 基隆市立信義國小畢業

