

Investigating the Antecedents of Intentions to Purchase a Netbook as a Second Laptop

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Abstract—This study aims to empirically test users' intentions to purchase a netbook as a second laptop by considering product attributes of innovative information technology (IT), individual perceptions about a new IT, personal innovativeness, and perceived enjoyment. Data was collected from two distinct groups; 272 respondents from university students and 319 practitioners from various industries. The empirical tests highlighted some implications for the distinct sample groups, which have different demands and perceptions of a netbook. These differences may be associated with the different social demography, usage environments, and perceptions of a new IT product. Nevertheless, the attributes of convenience, ease of use, affordability, portability, enjoyable innovative technology, and compact design are effective strategies of PC marketers for promoting users' intentions to purchase a netbook as a complement to their laptop computer, but not as a replacement.

Keywords- netbook; product attributes; perceived enjoyment; personal innovativeness

I. INTRODUCTION

With the prevalence of wireless Internet networks facilitating the increasing number of laptop users, netbooks, which are sometimes called "mini-notebooks," are lighter, smaller, and lower-priced computers [15]. Netbooks are outfitted for basic information-related tasks only. One of the first netbooks, and that which is credited with starting the netbook revolution, was the Asus Eee PC, two models of which were launched on October 16, 2007. These netbooks was designed by Asus, one of biggest computer manufacturers in Taiwan, and characterized as "easy to learn, easy to work, and easy to play" in the advertising slogan during the launch of the netbook's 4G model (Eee 700 series) in Taiwan. With the Asus Eee PC, users could do word processing, send emails, and surf the web, at a lower cost of less than \$270 [7].

Netbooks have some key features including ease of use, compact size, lightweight, low-cost, Internet-enabled, entertainment-ready, and portable to numerous locations. In addition, netbooks provided with high-speed wireless Internet access, such as Wi-Fi networks, typically provide full network services similar to those for mainstream laptops and desktop PC users, and with transfer rates up to 11 Mbps at distances of up to 500 feet [28]. Following the successful coverage of high-speed wireless networks, netbooks have become very popular as more portable versions of laptops, particularly as they offer the basic

functionality of laptop computing and the portability that allows users to carry the netbook anywhere.

Figure 1. LITERATURE REVIEW

A. *Personal Innovativeness in the Domain of Information Technology (PIIT)*

Rogers [29] identified the five characteristics of an innovation as relative advantage, compatibility, complexity, observability, and trialability affecting the rate of adoption of an innovation. His theory was characterized as an information-centric view of the diffusion of innovation by a meta-analysis of a variety of innovations. A follow-up study by Agarwal and Prasad [2, 3] proposed a new construct that further illuminated the explicit relationships in the technology acceptance constructs. They argued that the behavior of innovators was perceived as active information-seeking about new ideas from mass-media exposure and that innovators relied less on the subjective evaluation by other members of their social system about the expected consequences of adopting an innovation. In addition, they redefined individual perceptions of innovation characteristics that consisted of relative advantage, ease of use, and compatibility. Most importantly, they concluded that personal innovativeness in the domain of IT (PIIT) served as an important mediator for the antecedent and consequences of an individual's perceptions of a new IT. This is primarily due to information processing of the perception development that was widely used in the technology acceptance literature [e.g., 27], and an individual's differences in risk-taking propensity leading to his or her intention to use a new IT.

In addition, Agarwal and Prasad's findings [3] indicated that ease of use perceptions were not related to intentions even though ease of use was viewed as an important design requirement for the system. One possible explanation for this finding was that the system was inherently user-friendly and easy to use, and therefore, ease of use was not considered by the intended user population to be a system characteristic.

B. *Product Attributes Associated with Enjoyment for Users' Acceptance of a New IT*

The product attributes of an innovation play an important role in affecting consumers' attitudes toward using a new product, and assist distinguishable market

segmentation [27]. It has been argued that a consumer's intention to purchase depends on the degree to which he or she associates the product attributes with the consumption situation. In the assessment of IT acceptance, Davis [13] proposed the technology acceptance model (TAM), in which the objective design characteristics of a system would have a direct effect on the perceived usefulness in addition to indirect effects via the perceived ease of use. Briefly, the TAM posited that an individual's intention to use the technology was driven by his or her affective response (attitude), and two beliefs (perceived practical functionality and perceived ease of use) that were the salient antecedent attitude factors.

Empirical tests in a variety of information technologies have proved that the main contribution of using the TAM was to provide a robust and parsimony framework of how individual beliefs and attitude toward using a specific system could be closely correlated [30]. However, the evaluation processes that influenced the acceptance of a new IT included the unique attributes of the system itself, such as light weight, portability, and some emerging functions that have been long been ignored in the TAM model, such as enjoyment or fun. This is referred to as "the extent to which the activity of using the computer is perceived to be personally enjoyable in its own right, apart from any performance consequences that may be anticipated." This highlights the importance of perceived enjoyment as an intrinsic motivation in new IT use. In particular, lack of a comprehensive set of intrinsic motivations (e.g., perceived enjoyment/fun) in the TAM was widely discussed and modified by prior studies of a new IT use [8, 20, 30].

The purpose of this research is to address the effectiveness of a netbook as a user's second laptop and innovative features such as portability, speed, connectivity, and compatibility, in enriching one's lifestyle from the user's perspective. Netbooks as the main case reflect the study assumption in which the requirement of information technologies for users' lifestyles includes personal life, job, and entertainment that seem to have an ambiguous boundary.

III. MODEL DEVELOPMENT AND HYPOTHESES

By reviewing the relevant theoretical frameworks of a computer and IT-related product usage, the model (see Figure 1) represents an integration of the theoretical perspectives discussed above, and suggests that netbook usage is a function of intrinsic motivation, individuals' characteristics, and product attributes.

A. Product Attributes

Consumers prefer different products or brands for different occasions. Indeed, an increasing number of studies have established the impact of the perceived situation on a consumer's evaluation of product attributes [16, 27]. The netbook was focused on convenience attributes, including compact functions, the ease of navigating via a wireless device, and useful communication without any location

limitations. Its attributes can be divided into two parts: system features and product portability. These were proposed as antecedent factors of perceived enjoyment, and as a consequence of perceptions and personal innovativeness.

1) System Features (SF)

Dabholkar [11] proposed a research model based on the attributes of systems and described five system features of ATMs, which are speed of delivery, ease of use, reliability, enjoyment, and control. Moreover, Liao and Cheung [22] constructed the usefulness of Internet-based attributes, such as accuracy, security, network speed, user-friendly, user involvement, and convenience that integrated into salient quality attributes underlying perceived usefulness. In the present study, the system features of a netbook are treated as to the extent to which users perceive the compact functions of IT to meet the maximum requirement of the available information. These usable functions can be implemented and elicit potential adopters' intrinsic motivation when interacting with a netbook.

2) Product Portability (PP)

Laptop computers have become highly popular as portable versions of desktop computers, particularly as they offer the full functionality of desktop computing and the portability that allows users to carry their laptops anywhere. Furthermore, they were especially designed to be brought into the classroom or on campus [14]. The laptops portability characteristic and wireless communication via built-in wireless devices installed in the laptop, have provided users with more mobility and freedom of choice [10]. In this study, the product portability of a netbook is considered as the extent to which product portability is perceived as "portable (ubiquitous) information," which can be accessed by users anytime or anywhere from the Internet or their devices without attaching any lines or wires. Thus,

H₁: Product portability is positively related to SF.

H₂: Product portability is positively related to ATT.

H₃: Product portability is positively related to ENJ.

B. Individual Perceptions about a new IT

1) Ease of Use (EOU)

Individuals' perceptions of the attributes of innovations could include the complexity of the innovation technologies, which were perceived as relatively difficult to understand and use, and could result in a negative correlation with its rate of adoption [28]. This point was verified in Moore and Benbasat [26], who developed an instrument to measure the perceived attributes of innovations that an individual might have when adopting an information technology. Their model involved an ease of use scale, which examined the convergent and discriminant validity, rather than its

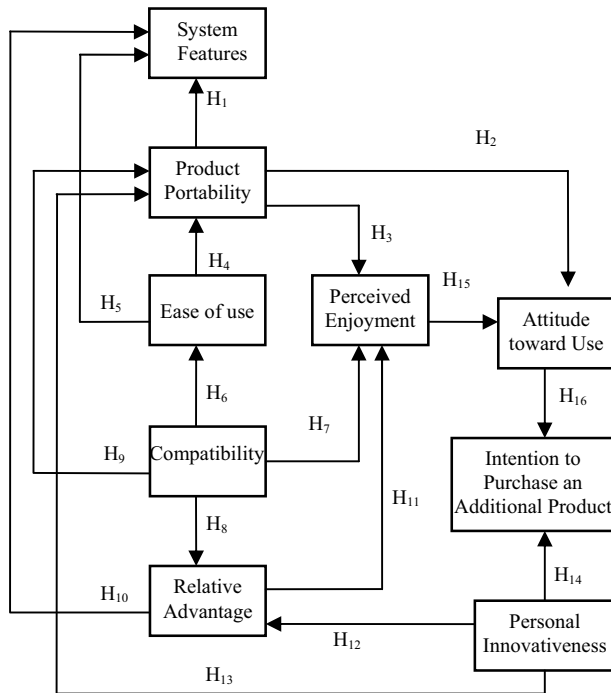


Figure 1. Research Model

complexity. Furthermore, Agarwal and Prasad [2, 3] constructed a research model that delineates consumers' adoption of information technologies and defined ease of use as a factor in users' perceptions of a new IT.

Perceived ease of use refers to "the degree to which an individual believes that using a particular system would be free of effort." Ease of use is thought to be a potentially important determinant of computer use [17, 20]. In this study, ease of use is perceived as an important characteristic of a new IT and this characteristic highlights the effect of system features on user's acceptance. Therefore,

H₄: Ease of use is positively related to PP.

H₅: Ease of use is positively related to SF.

2) Compatibility (COMP)

Compatibility refers to the extent to which a system is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. Ideally, higher compatibility and less uncertainty for the potential adopters would fit more closely with the individual's life conditions [28]. Al-Gahtani and King [5] empirically tested and showed that compatibility had a significant effect on perceived enjoyment and ease of use, indicating that consumers would be more likely to use an innovative technology if it looked like something that would be enjoyable. In the context of a netbook, an individual's lifestyle would strongly influence his or her decision to use a netbook. Furthermore, an individual whose lifestyle revolves around the Internet would be more likely to adopt a netbook since wireless Internet is in fact an extension of the Internet. Thus,,

H₆: Compatibility is positively related to EOU.

H₇: Compatibility is positively related to ENJ.

H₈: Compatibility is positively related to RA.

H₉: Compatibility is positively related to PP.

3) Relative Advantage (RA)

Relative advantage is an important part of message content in evaluating whether or not a new product has a characteristic of the innovation. Earlier studies revealed that the relative advantage of a new product has been consistently found to be an important antecedent factor in adopting an innovation [2, 3, 30]. Similarly, Teo and Lim [42] applied relative advantage as an antecedent factor of attitude toward using mobile phones with WAP-enabled functions, and Mallat [25] found that relative advantage had a positive effect on consumer adoption of mobile payments.

The relative advantage of a netbook makes it possible for potential users to access the Internet services and to better manage their daily lives. Though other devices such as PDAs can facilitate some degree of similar performance, a netbook remains an ideal device for personal information technology, primarily because a netbook offers much lower costs in accessing information and the possibility of ubiquitous personal communication. Therefore,

H₁₀: Relative advantage is positively related to SF.

H₁₁: Relative advantage is positively related to ENJ.

C. Personal Innovativeness (PI)

Agarwal and Prasad [2] defined personal innovativeness as the willingness of an individual to try out new information technologies. Individuals who perceived the innovation as relatively worthwhile and were more innovative might be more willing to adopt the innovation in the face of uncertainty about benefits. Several researchers thought of personal innovativeness as a personality trait. The traits of personal innovativeness could be differentiated more or less by identifying attitudes or other individual properties, including predisposition toward new ideas and change [1, 24, 32]. Thus, the innovative disposition may well serve as the primary and direct determinant for the attitude toward using a netbook, as well as intention to purchase an additional product. Therefore,

H₁₂: Personal innovativeness is positively related to RA.

H₁₃: Personal innovativeness is positively related o PP.

H₁₄: Personal innovativeness is positively related to INT.

D. Perceived Enjoyment (ENJ)

Perceived enjoyment was depicted as an activity that might decide the individual's perception of how much fun he or she could have with the activity [8]. Individuals probably engaged in activities because they led to extrinsic rewards and brought about enjoyment and pleasure. The characterization of technology adoption associated with perceived enjoyment has been reported to affect consumers' adoption of IT for assessing the Internet [30]. In the computer-mediated environment (CME) context, interacting with the Internet could be conceptualized as a flow state facilitated by a seamless response, which is intrinsically enjoyable, and associated with a loss of self-consciousness

and self-reinforcement [19].

In this study, those users who considered that netbooks offered more convenient and compact functions, faster boot-up, and ease of navigating through wireless devices were more likely to consider adopting one as a second laptop. Thus,

H₁₅: Perceived enjoyment is positively related to ATT.

E. Attitude toward Use (ATT)

Attitude has long been identified as a cause of intention, and psychologists have discussed the theoretical construct attitude for decades. Ajzen and Fishbein's [4] paradigm was classified into two constructs: attitude toward the object and attitude toward the behavior. In the TAM model, attitude toward use was defined as the mediating affective response between two beliefs (perceived usefulness and perceived ease of use) and intentions to use a target system [12, 13]. To further understand a user's attitude toward using a netbook as a second laptop, this research adequately merges user's affect and response surrogate as his or her attitude toward the purchase. However, intention to purchase an additional product might take place either at the first use or within a short time because potential users could request information instantly and directly via actual use. Therefore, H₁₆: An individual's attitude is positively related to INT.

V. METHODOLOGY

A. Data Collection

The data to test the research model came from university students and practitioners. From the perspective of marketers, these two groups were highly considered as potential users, as they often used a netbook in their workplaces or lives. Students in particular accepted netbooks as a necessary part of their curriculum on campus because they have a compact design, are lightweight, and have built-in wireless network. In addition, the practitioners considered netbooks as personalized information tools designed to enrich their lifestyles, through surfing the Internet, viewing multimedia, and sharing knowledge on the move.

In summary, a total of 272 university students from three medium-sized universities in southern Taiwan completed the questionnaire as well as 319 practitioners from various industries. A total of 259 valid paper-and-pencil samples and 60 valid email samples were returned.

B. Measures

The measures used to operationalize the constructs included in the research model are mainly adapted from relevant prior studies, with minor wording changes to trim the constructs to fit the targeted context. Moreover, all items apply a seven-point Likert-type scale ranging from (1) strongly disagree to (7) strongly agree. To ensure the desired balance and randomness of the items in the questionnaire, all items were randomly arranged to reduce the potential ceiling (of floor) effect that induces monotonous responses to the items designed to measure the

TABLE I COMPARISONS OF THE MEASUREMENT MODELS

Model-fitting Indices	Student Model	Practitioner Model
χ^2	1153.72	953.89
df.	593	491
P-value	0.000	0.000
RMSEA ^a	0.059	0.055
SRMR ^b	0.054	0.052
NFI ^c	0.93	0.93
NNFI ^d	0.96	0.96
CFI ^e	0.96	0.96
GFI ^f	0.82	0.85
AGFI ^g	0.80	0.82
Deleted items	EOU3, PI5, ATT5	EOU3, PI5, RA3, RA4, ATT3, ATT4

a: RMSEA (Root Mean Square Error of Approximation); b: SRMR (Standardized Root Mean Square); c: NFI (Normed Fit Index); d: NNFI (Non-Normed Fit Index); e: CFI (Comparative Fit Index); f: GFI (Goodness-of-Fit Index); g: AGFI (Adjusted Goodness-of-Fit Index)

TABLE II COMPLETELY STANDARDIZED FACTOR LOADING AND CONSTRUCT RELIABILITY ESTIMATES

Constructs	Student Mode		Practitioner Mode	
	CR ^a	AVE ^b	CR	AVE
System Features	0.854	0.595	0.769	0.531
Ease of Use	0.721	0.567	0.750	0.625
Product Portability	0.847	0.528	0.857	0.501
Compatibility	0.914	0.680	0.840	0.515
Personal Innovativeness	0.868	0.622	0.803	0.503
Relative Advantage	0.870	0.576	0.786	0.551
Perceived Enjoyment	0.842	0.521	0.839	0.513
Attitude towards Use	0.801	0.505	0.757	0.515
Intention to Purchase an Additional Product	0.767	0.521	0.801	0.570

a: Construct reliability (CR) = $\rho_c = (\sum \lambda_i)^2 / [(\sum \lambda_i)^2 + \sum \text{var}(\epsilon_i)]$, where λ_i is the component loading to an indicator and $\text{var}(\epsilon_i) = 1 - \lambda_i^2$.

b: Average variance extracted (AVE) = $(\sum \lambda_i^2) / n$, where n is the number of observed variables.

same construct. Items assessing various constructs are shown in the Appendix.

VI. DATA ANALYSIS AND EMPIRICAL RESULTS

In this section, the study utilizes a two-stage data analysis approach recommended by Anderson and Gerbing [6] to assess the measurement model of the factors and to test the structural model. The CFA (confirmatory factor analysis) and SEM (structural equation modeling) using LISREL 8.54 [21] has been conducted for all the scales together. To reflect the extent to which the hypothesized model in the analysis of CFA is appropriately described, some variables with misspecifications are captured by the modification indices (MIs), where variables with greater than 8 MIs should be deleted from the factor loading matrix [9]. Through a series of purification of CFA, each revised model performs a better model-fitting index, as shown in Table I.

In addition, the constructs show a discriminant validity and construct reliability. Table II shows that all constructs fulfilled the recommended levels of construct reliability (CR) and average variance extracted (AVE), with greater than the acceptable 0.70 and 0.50, respectively [10, 20]. Following up on the CFA, the SEM is used to test the pattern of causal structure linking among exogenous and

TABLE III COMPARISON OF PARAMETER ESTIMATES AND STATISTICAL SIGNIFICANCE FOR TWO SURVEYS

Hypotheses	Path Coefficients for Students	Significance	Path Coefficients for Practitioners	Significance
H ₁	PP → SF ($\beta_{13} = 0.02, t = 0.22$)	No	PP → SF ($\beta_{13} = 0.48, t = 5.61$)	Yes (Positive)
H ₂	PP → ATT ($\beta_{63} = 0.10, t = 0.93$)	No	PP → ATT ($\beta_{63} = 0.28, t = 3.59$)	Yes (Positive)
H ₃	PP → ENJ ($\beta_{33} = -0.31, t = -4.76$)	Yes (Negative)	PP → ENJ ($\beta_{33} = -0.01, t = -0.10$)	No
H ₄	EOU → PP ($\beta_{32} = 0.43, t = 4.20$)	Yes (Positive)	EOU → PP ($\beta_{32} = 0.24, t = 3.28$)	Yes (Positive)
H ₅	EOU → SF ($\beta_{12} = 0.69, t = 6.21$)	Yes (Positive)	EOU → SF ($\beta_{12} = 0.26, t = 3.11$)	Yes (Positive)
H ₆	COMP → EOU ($\gamma_{21} = 0.35, t = 5.67$)	Yes (Positive)	COMP → EOU ($\gamma_{21} = 0.36, t = 3.70$)	Yes (Positive)
H ₇	COMP → ENJ ($\gamma_{51} = 0.27, t = 2.91$)	Yes (Positive)	COMP → ENJ ($\gamma_{51} = 0.27, t = 2.91$)	Yes (Positive)
H ₈	COMP → RA ($\gamma_{41} = 0.47, t = 6.74$)	Yes (Positive)	COMP → RA ($\gamma_{41} = 0.47, t = 5.25$)	Yes (Positive)
H ₉	COMP → PP ($\gamma_{31} = 0.30, t = 4.73$)	Yes (Positive)	COMP → PP ($\gamma_{31} = 0.51, t = 6.28$)	Yes (Positive)
H ₁₀	RA → ENJ ($\beta_{54} = 0.37, t = 4.30$)	Yes (Positive)	RA → ENJ ($\beta_{54} = 0.37, t = 4.30$)	Yes (Positive)
H ₁₁	RA → SF ($\beta_{14} = 0.16, t = 2.33$)	Yes (Positive)	RA → SF ($\beta_{14} = 0.19, t = 2.76$)	Yes (Positive)
H ₁₂	PI → RA ($\gamma_{42} = 0.46, t = 6.44$)	Yes (Positive)	PI → RA ($\gamma_{42} = 0.26, t = 3.30$)	Yes (Positive)
H ₁₃	PI → PP ($\gamma_{32} = 0.58, t = 7.89$)	Yes (Positive)	PI → PP ($\gamma_{32} = 0.24, t = 3.33$)	Yes (Positive)
H ₁₄	PI → INT ($\gamma_{72} = 0.05, t = 0.72$)	No	PI → INT ($\gamma_{72} = 0.28, t = 3.38$)	Yes (Positive)
H ₁₅	ENJ → ATT ($\beta_{65} = 0.69, t = 7.98$)	Yes (Positive)	ENJ → ATT ($\beta_{65} = 0.54, t = 6.70$)	Yes (Positive)
H ₁₆	ATT → INT ($\beta_{76} = 0.49, t = 5.86$)	Yes (Positive)	ATT → INT ($\beta_{76} = 0.36, t = 4.15$)	Yes (Positive)
Model-fitting Indices	$\chi^2 = 1153.72$ (p -value = 0.00), df. = 593, RMSEA = 0.059, SRMR = 0.054, CFI = 0.96, NFI = 0.93, NNFI = 0.96, GFI = 0.82, AGFI = 0.80.		$\chi^2 = 953.89$ (p -value = 0.000), df. = 491, RMSEA = 0.055, SRMR = 0.052, CFI = 0.96, NFI = 0.93, NNFI = 0.93, GFI = 0.85, AGFI = 0.82.	

endogenous variables [6, 9]. To perform the best-fitting model, a final model is evaluated by reviewing the LISREL output that indicates the MIs of both the gamma matrix (structural coefficients relating exogenously to endogenous variables) and the beta matrix (structural coefficients relating endogenously to endogenous variables). As a result, the distinction between the two target surveys is illustrated by the model assessment, as shown in Table III.

Results for the two surveys present a variety of issues described as follows:

- In the student survey, the product portability of a netbook's product attributes presents a stronger reverse link to perceived enjoyment, contrary to the expected hypothesis. A possible explanation is that students' perceptions of netbooks focus on the compact size, the lightweight design, and the high portability designed to access emails, browse the Web, and utilize Web-based applications on the move.
- The compatibility and relative advantages are significant for perceived enjoyment primarily because the innovation technologies of a netbook have been emphasized by PC makers, in terms of the relative advantage and compatibility for compact design. All respondents recognized these traits as the drivers of perceived enjoyment while using a netbook as a second laptop, and saw a use of netbooks for entertainment purposes, through a series of improvements and innovations, apart from any anticipated performance consequence.
- The influence of personal innovativeness on intention to purchase an additional product for practitioner survey was strongly significant, but not significant in the student survey. This reveals that practitioners are more likely to take a risk in order to cope with high levels of uncertainty than students,

and further develop a positive intention to adopt a new product.

- The impact of product portability comes from perceptions of compatibility and relative advantage. The advantages of a netbook relative to a standardized laptop are that a netbook is more portable for students to use for their studies or for surfing the Internet on campus.

VII. CONCLUSION

A. Managerial Implications

The main findings of this study were gained from two distinct groups of respondents. Their significant differences were important as they helped identify product attributes and individual perceptions about a new IT product or services that are likely to become crucial as users with higher levels of personal innovativeness are involved in their intention to purchase an innovative IT product, as a complement to their existing products. This study also addressed the following implications:

- The distinct purpose of the research framework was significantly different compared to the TAM [12, 13] and framework of Agarwal and Prasad [2, 3] in an attempt to explore potential adopters of innovative IT. This study focused on the intention of potential users to purchase a netbook as a laptop complement, and not as a replacement.
- Studies have successfully shown that product attributes affected an individual's intrinsic motivation (perceived enjoyment). Individuals, who are more likely to derive greater enjoyment and have more fun doing a given task using a netbook can access the Internet anytime and anywhere. These individuals should pay much attention to the above discussion.
- From the perspective of practice, a PC maker

launched a new model of IT, a netbook, by refining and rethinking computer features. Enhancing some product attributes for a netbook would highly satisfy specific users' information requirements in the ubiquitous wireless environment.

- Evidence from the empirical test of two different groups of respondents revealed that inherent product attributes, designed by innovative techniques or stemming from improving existing functions, presented a causal relationship. This relationship is consistent with the previous contention that the selection of appropriate product attributes and realistic levels necessitated the users' ability to utilize numerous attributes in their decision-making [27].
- The inclusion of personal innovativeness in this study could increase understanding of both how perceptions and product attributes were formed and the subsequent role affecting an individual's attitude and intentions to purchase a netbook as a complement laptop. Compared with the student survey, the practitioners indicated higher personal innovativeness and could further reduce risk in the face of uncertainty by making a series of evaluations of product attributes in their decision making process.

B. Limitations and Directions for Further Research

Some limitations may be related to collecting the data and interpreting the results. The first limitation may be the areas of sampling, in which respondents were drawn from a highly homogenous groups residing in a single city. Therefore, the study possibly lacked the diversity that could be expected from a comparable sample, especially in the student survey. The second limitation may be a lower percentage of netbook owners for two target respondents that could result in model evaluation in terms of the user's acceptance of a netbook as a complement to her or her laptop.

Further research should be conducted to investigate the constructs and cues that would most likely increase the intention of potential users to purchase a netbook as a complementary laptop. The future of the netbook and its market penetration remains to be seen, but this study empirically proves a high level of promise concerning this product's visibility in the future of personal information tools. Therefore, evaluating the usability and product attractiveness of an emerging IT product could be useful in understanding the thinking of potential users.

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APPENDIX VARIABLES DEFINITIONS AND MEASUREMENTS

Constructs/ Variables	Definitions/Source	Wording
System Features	The extent to which an individual perceives that a variety of unique functions from a new IT is useful, consistent and reasonable. [12, 13]	SF1. Compact design for layout of netbook. SF2. Providing prerequisite functions. SF3. Provides a fast boot-up time to get into action. SF4. Easier to build the relationships with others via built-in Wi-Fi or wireless devices.
Ease of Use	The extent to which an individual believes that using a new IT would be free of physical and mental effort. [12, 13]	EOU1. Easy-to-use. EOU2. User-friendly interface. EOU3. Easy to learn.
Product Portability	The extent to which the compact design of a new IT and its usable contents allows users to carry then anywhere. [14]	PP1. More convenient to handle information on the go. PP2. More convenient to communicate with others on the go. PP3. More convenient to manage my work and lifestyle PP4. All built-in functions of a netbook fit the way I use IT outside my home or office. PP5. Share knowledge or information with others on the go.
Compatibility	The extent to which the innovation of a new IT is perceived as consistent with the existing values, past experiences, and needs of potential adopters. [26, 27]	COMP1. Using a netbook suits my lifestyle. COMP2. Using a netbook suits the way I like to engage in online activities. COMP3. The functions provided by a netbook meet my current needs. COMP4. Using a netbook suits my position. COMP5. The functions provided by a netbook are compatible with all aspects of my current work.
Relative Advantage	The extent to which the innovation of a new IT is perceived as being better than it precursor. [26, 27]	Compared with a standardized laptop, RA1. A netbook offers me a reasonably priced computer tool. RA2. Using a netbook can enable me to improve my daily activities. RA3. A netbook with compact configurations meets my needs. RA4. A netbook offers me personalized services. RA5. A netbook is an ideal tool for Internet surfing.
Personal Innovativeness	Personal innovativeness, a relatively stable individual trait across situational considerations, is conceptualized as the willingness of an individual to try out any new IT. [2, 3, 23, 27]	PI1. I am interested in seeking new innovative products. PI2. I like to use innovative products to enrich my lifestyle. PI3. If I heard about a new information technology product, I would like to experience it. PI4. Without experiencing the new innovative products, I would like to try it. PI5. Among my peers, I am usually the first to explore new information technology products.
Perceived Enjoyment	The extent to which an immediate pleasure and joy is elicited from the individual's experiences with a new IT and perceives any activity involving use it as inherently enjoyable. [8, 11]	If I were actually using a netbook, this would... ENJ1. Be appealing. ENJ2. Be enjoyable. ENJ3. Be entertaining. ENJ4. Be interesting. ENJ5. Be funny.
Attitude toward Use	The extent to which attitude toward using a new IT refereed to consumer' overall evaluation by exploratory acquisition of products and exploratory information seeking. [4]	ATT1. A netbook makes it very easy for me to build a relationship with others. ATT2. Surfing the Web using a netbook is an excellent way for me to spend time. ATT3. I am pleased while I am exploring a netbook. ATT4. A netbook is a playful experience for me. ATT5. I am part of a like-minded group of people while using a netbook.
Intentions to Purchase an Additional Product	The extent to which an individual assess the likelihood that he or she will purchase a homogenous product. [Modified from 23]	INT1. I always compare product characteristics among brands of a specific netbook. INT2. It would take a very long time to decide before buying a netbook. INT3. I would like to buy a netbook as a second laptop.