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Research Article

UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP

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The smart mobile devices have emerged during the past decade and have become one of the most dominant consumer electronic products. Therefore, exploring and understanding the factors which can influence the acceptance of novel mobile technology have become the essential task for the vendors and distributors of mobile devices. The Phablets, integrated smart devices combining the functionality and characteristics of both tablet PCs and smart phones, have gradually become possible alternatives for smart phones. Therefore, predicting factors which can influence the acceptance of Phablets have become indispensable for designing, manufacturing, and marketing of such mobile devices. However, such predictions are not easy. Meanwhile, very few researches tried to study related issues. Consequently, the authors aim to explore and predict the intentions to use and use behaviors of Phablets. The second generation of the Unified Theory of Acceptance and Use of Technology (UTAUT2) is introduced as a theoretic basis. The Decision Making Trial and Evaluation Laboratory (DEMATEL) based Network Process (DNP) will be used to construct the analytic framework. In light of the analytic results, the causal relationships being derived by the DEMATEL demonstrate the direct influence of the habit on other dimensions. Also, based on the influence weights being derived, the use intention, hedonic motivation, and performance expectancy are the most important dimensions. The analytic results can serve as a basis for concept developments, marketing strategy definitions, and new product designs of the future Phablets. The proposed analytic framework can also be used for predicting and analyzing consumers' preferences toward future mobile devices.

1. Introduction

Advances in the smart mobile devices during the past years have significantly influenced consumer behaviors, life styles, and the development of the electronic industry. Therefore, discovering and exploring the crucial factors which can influence the acceptance and continuous usage of the smart mobile devices have become indispensable for marketers and designers to enable such devices to reach better and to satisfy customers' anticipation [1, 2].

Exploring and studying the issues of consumer technology adoption have been discussed in a variety of domains. During the past decades, social psychologists have constantly developed and proposed many theories as predicting frameworks for precisely analyzing consumer behaviors of adopting new technology, for example, the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), the Technology Acceptance Model (TAM), the Diffusion of Innovation (DOI), and the Unified Theory of Acceptance and Use of Technology (UTAUT). These theories have been widely accepted and applied in many of the different fields, such as behavior science, system engineering, management, computer science, and education.

Past researches on technology adoption can be divided into two categories: the firm-level issues as well as the individual-level ones. On one hand, the researches on organization level issues regarding to how employees in the organization assess the usage satisfaction and usefulness regarding the adoption of a new technology in the work processes. On the other hand, the researches on the individual level referred

to how users or customers evaluate the satisfaction with respect to the adoptions and usages of a novel technology in their lives from the dimensions of perceived ease of use and usefulness and so forth. In general, the model of technology acceptance has always been regarded as a useful analytic framework for verifying or exploring user acceptances and adoptions of new high technology. Due to the fast progress of emerging smart mobile technologies, consumer-electronics firms such as Apple, Samsung, L.G., and SONY aggressively expand their scope to smart mobile devices and further maximize the profitability and the market share.

During the past years, the Phablet, an integrated smart device combining the functionality and characteristics of both tablet PCs and smart phone, has gradually become possible alternatives for smart phones. Therefore, predicting factors, which can influence the acceptance of Phablets, have become indispensable for designing, manufacturing, and marketing of such mobile devices. However, such predictions are not easy. Meanwhile, very few researches tried to study related issues. Consequently, the authors aim to explore and predict the intentions to use and use behaviors of Phablets.

To predict precisely consumers' preferences toward the Phablet products, the lead user method will be adopted for investigating innovators or early adopters' perspectives. Rogers [3] has indicated that the early adopters' or innovators' usage experience and use behavior would influence later bulk of users to accept new technology or product [3]. Further, most consumer electronics providers often investigated consumers' preferences toward disruptive innovative electronics products (e.g., the migration from the traditional function phones to the configurable smart phones) based on innovators' or early adopters' use experiences as the basis to define or improve their products. Thus, the lead user method, which is a useful theory, will be adopted by this research. Moreover, based on the author's very limited knowledge, existing researches on smart mobile devices ignored the role of Phablets. In order to cross this knowledge gap, this study will investigate the probable existence of Phablets technology acceptance.

The UTAUT2, a theoretic framework being derived from the TAM and the UTAUT2, is a powerful predicting framework being proposed by Venkatesh et al. [4]. The UTAUT2 can effectively explain and analyze people's technology acceptance behaviors for novel information technology (IT) products. Consequently, this research introduced the UTAUT2 as an analytic model. Further, since the functions of novel smart mobile devices are usually very hard for normal consumers to understand, the traditional market research approaches based on surveys of consumers' opinions are not feasible for such novel products. Therefore, this research will survey lead users' opinions for the preferences toward the next generation smart mobile devices.

The criteria for evaluating the lead users' preferences will first be derived from the UTAUT2. Then, the criteria will further be confirmed by the modified Delphi method. The Decision Making Trial and Evaluation Laboratory (DEMATEL) will be introduced to construct the influence relationships between criteria. Further, the DEMATEL based network process (DNP) will be used to derive the influence weights versus each dimension and criterion. Finally, the influences of the criteria on consumers' preferences toward novel smart devices can be derived.

Based on the empirical study results being derived by Taiwanese Phablet experts, the causal relationships being constructed by the DEMATEL demonstrate that the habit dimension has direct influence on other dimensions. The use intention and performance expectancy dimensions have the least influences on other dimensions. In practice, these dimensions should be prioritized in improvement than the rest of the dimensions. Furthermore, the weights being associated with the criterion and construct reveal that the use intention, hedonic motivation, and performance expectancy are the most important dimensions. The research results can serve as a basis for related Phablet devices' marketing strategy definition and product improvement. The proposed methodology can also be used for predicting users' adopting behavioral preferences and be employed for improving the gaps among the Phablet use factors.

The remainder of the paper is organized as follows. Section 2 is a review of the related literature and theories which include the predictions of high-technology consumer behaviors and the lead user method, as well as the UTAUT and UTAUT2. In Section 3, the research method will be introduced to construct the decision framework. An empirical study for selecting the most influential factors on the acceptances of novel smart mobile devices will be detailed in Section 4. Discussions will be presented in Section 5. Section 6 will conclude the paper with observations, summaries, and recommendations for future studies.

2. Literature Review

In this section, the past researches regarding the predictions of high-technology consumer behaviors will be reviewed at first. Then the lead user method will be introduced. The UTAUT and UTAUT2 theoretic models will then be reviewed. Finally, the possible criteria and dimensions which may influence users' technology adoptions based on the theoretic model will be reviewed and summarized.

2.1. Prediction of High-Technology Consumer Behaviors. Over the years, marketers and researchers have constantly explored the many motivating influences on purchase behavior [5–7]. Booth and Shepherd [8] argued that the factors of culture, economy, emotions, value, and attitudes will influence the decision process of consumer purchase behavior. Loudon and Della Bitta [9] also pointed out that the consumer purchase behavior is a decision process in which customers can choose and use the products and services. In other words, through the decision making process, consumer can examine their actions and the reason for why they would like to purchase this product. Subsequently, Kotler [10] further identified that consumer purchase behavior is affected by cultural, social, personal, and psychological factors. On the other hand, consumer behavior is often goal-oriented, not haphazard or accidental. For instance, consumers have a goal or a set of

goals seeking to satisfy presently unfulfilled needs. From the above, obviously, consumer behavior is the model of behavior that people follow in looking for, buying, using, or evaluating goods, services, and ideas that they expect to fulfill their needs and wants [11].

Prediction of consumer behavior is often an important task for marketing managers. They have to understand the possible purchasing behavior of consumer and the factors affecting consumer acceptance of products so that they can propose ideas for R&D staffs or related employees to improve and enhance the products. In high-technology consumer behavior, the concept of purchase behavior is important for its implication that consumers are different; thus, the marketing managers should develop differentiation marketing strategies to cope with variety of situations. de Bellis et al. [12] argued that the appropriate marketing strategies will foster rich interactions with their customers and enhance marketing efficiency and effectiveness. Thus, understanding the consumer behavior of high technology and defining the appropriate policy are a critical task for the Phablet manufacturers and marketers.

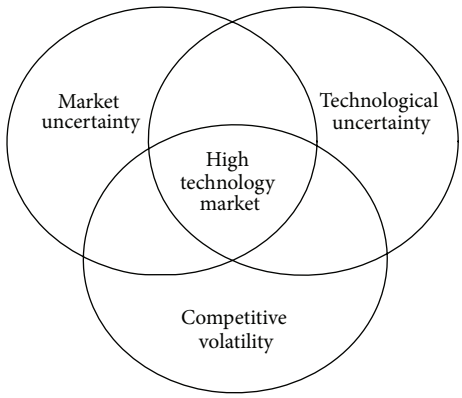
High-technology marketing often includes two parts: tangible and intangible technology marketing. In this research, we will focus on the tangible dimensions of electronic products. Marketing about technology products is an important external factor that influences the acceptance rate of a technological innovation [13]. Technology marketing often consists of advertising, word-of-mouth communication, marketing activities, Internet forums, and television product placements [13]. For technology usage of consumer behavior, Rogers [3] suggested that there are differences in consumers' disposition toward using technology. He further defined consumer into five groups illustrating their character, ranging from innovators to laggards [3]. Due to the differences of consumers' traits, technology readiness index being proposed to describe consumers' beliefs regarding various dimensions of technology differs. The definition of technology readiness is divided into four dimensions of consumers [14, 15]. (1) Optimism: optimism is a positive view of technology and belief, offering consumers increased control, flexibility, and efficiency in life due to technology. (2) Innovativeness: innovativeness is the tendency to be a technology pioneer and thought leader. (3) Discomfort: discomfort means having a need for the control and sense of being overwhelmed. (4) Insecurity: insecurity means disturbing technology for security and privacy reasons.

Through the studies of marketing and consumer purchasing behavior, marketers and researchers would aggressively like to develop appropriate marketing strategies to help electronic firms. Above all, these firms should understand those issues as follows before they define marketing strategies [16]: (1) how consumers think, feel, choose from different products, and make decisions; (2) how the consumers are affected by the environment and their background (i.e., media and family); (3) the behavior of consumers while making buying decisions; (4) the decisions influenced by the limitation of consumer information abilities; (5) how consumers' decision strategies and motivation differ between products that are different in level of interest or importance; (6) how companies can adapt and improve their marketing strategies to more effectively achieve the consumers' needs.

In comparison to the traditional market, Moriarty and Kosnik [17] summarized the characteristics of a high-technology market from three dimensions: the market uncertainty, the technological uncertainty, and the competitive volatility. (1) Market uncertainty refers to the ambiguity about the type and extent of consumer needs that can be satisfied by a particular technology [17, 18]. There are five sources which can result in the high-technology market certainty. The sources include the needs which might be met by the new technology, the possible changes of the needs in the future, the adoption of industry standards or not, the diffusion rate of innovations, and the potential size of the high-technology market. (2) Technological uncertainty means that whether the technology can meet specific needs is unclear. Five factors give rise to technological uncertainty. The factors include the new product function, the delivery timetable, the service quality, and the sustainability problem being raised by the new technology. (3) Competitive volatility refers to both the intensity in extent of change in the competitive landscape and the uncertainty about competitors and their strategies [19]. Competitive volatility is composed of three sources: the new competitors in the future, new competitive tactics, and new products to compete with. Figure 1 summarizes the abovementioned characteristics of high-technology market.

2.2. The Lead User Method. Increasingly, firms are recognizing the power in innovation idea development [20]. Either service design concepts or R&D, such idea often inspires a challenge of companies [21]. In novel product development, many literatures suggest techniques for idea creation such as benchmarking [22], user observation [23], or lead user method [24]. Among these, the lead user method has been shown to provide the highest potential to create commercially attractive and highly novel innovations [20] (e.g., [25, 26]). In other words, lead user theory can effectively understand consumer purchase behavior and serve as a development basis for next generation product. Moreover, most of the target users for your product will have difficulties expressing their needs for your products [27]. And a vast majority of your target users will certainly not be able to come up with the innovations themselves [27]. There will always be some users who are exceptions. These are the lead users of your products or services. For example, if you are designing the software of smart phones, you will be looking at the people who are already designing programming for your software.

In high-technology industries, the world moves so rapidly. The related real-world experiences of ordinary users are often rendered obsolete by the time a product is developed, or during the time of its projected commercial lifetime [28]. Thus, in the research of innovative products, Von Hippel defined "lead user" as a person displaying two characteristics regarding a given new product [24, 28]. (1) The lead users face needs that will diffuse in the marketplace but face them before the bulk of that marketplace encounters them. (2) The lead users are positioned to benefit significantly from obtaining a solution to those needs. Since the studies on customer involvement in successful innovation prove the



Source: [17]

Figure 1: Characterizing the high-technology market.

Table 1: The number of innovations across various industries.

Industry	Source of innovation		
	User	Manufacturer	Other
Computer industry	33%	67%	
Chemical industry	70%	30%	
Pultrusion-process machinery	85%	15%	
Scientific instrument with major functional improvement	82%	18%	
Semiconductor-electronic process equipment with major functional improvements	63%	21%	16%*
Electronic assembly	11%	33%	56%+
Surface chemistry instruments with new functional capability	82%	18%	

*Joint user—manufacturer innovation.
+Supplier innovation.
Source: [28, 106].

importance of lead users [29], who can effectively foster the product improvement [30] and develop products that are ready for the market [31], the lead user analysis is used to identify the characteristics such as traits, knowledge, and status. Subsequently, based on lead user theory, Belz and Baumbach [32] further defined six characteristics of online consumer purchasing behavior including ahead of trend, dissatisfaction, product-related knowledge, use experience, involvement, and opinion leadership. Research on lead users shows that many products are initially thought of and even prototyped by users rather than manufacturers [19, 33]. For instance, Table 1 shows that, across various industries, the number of innovations conceived of by users is quite high.

The traditional analytic methods for defining incremental innovation and radical innovation products or services usually initiate by deriving consumers' needs at the very beginning. Then, such needs will be summarized by the new product development team to create innovations. However, these methods do not take users into consideration in the innovation process. Consumers with usage experience of related products will be able to explain where they have problems with the innovative product, what their specific needs are, and what the functions they use are [27]. Therefore, an introduction of the opinions being provided by lead users is especially important and useful for high-technology firms. The steps for innovations based on lead users' opinions include [27] the following: (1) find the lead users, (2) prepare for a lead user workshop, (3) run the workshop, and (4) document the results and proceed to the output.

2.3. UTAUT. The UTAUT was proposed by Venkatesh et al. [34] as an integrated framework of eight related technology acceptance theories or models. Those theories or models include the diffusion of innovation theory, the TRA, the TPB, the motivation theory, the hybrid model of TPB and TAM, the original TAM, the PC utilization model, and the social cognitive theory. The perceived ease of use and the perceived usefulness were incorporated in this model by using the effort expectancy and the performance expectancy dimensions. The UTAUT was conducted in two rounds of studies, in which the data was collected from six organizations in three rounds of surveys. The variance of explanations in two rounds reached about 70% and 50% respectively.

In addition to the two most important constructs of performance expectancy and effort expectancy, the other constructs, which include the social influence, the facilitating conditions, the intentions to use, and the usage behaviors, were also included in this model. Venkatesh et al. [34] examined the three constructs consisting of self-efficacy, anxiety, and attitude toward using technology in UTAUT model. However, these three constructs have no strong impact on others. Thus, three constructs are removed from UTAUT model.

2.4. UTAUT2. The UTAUT was developed as a comprehensive integrated model for better understanding consumer acceptance toward new technology or system. According to Venkatesh, there are three types which can enhance the prediction ratio of technology acceptance. For the first type, Venkatesh considers the consumer acceptance of new technology in variety of contexts such as culture and population. For the second type, Venkatesh considered to add different concepts to the model so as to widen the theoretic relationships of UTAUT. For the third type, Venkatesh considered to synthesize new predictor of variables into the UTAUT. Despite the integrated model in which some variables are usually added, Venkatesh et al. [4] emphasizes the needs to include salient predictor variables that can be used within a user technology use context. They also examined more related consumer behavior of studies and alter the prior perspective (from organizations to individuals) by adjusting UTAUT model to establish a new prediction framework, namely, UTAUT2. Currently, this newest model has gradually been adopted for exploring various issues such as self-technology service, smart mobile device adoption, learning management software acceptance, and healthcare industry.

With regard to this prediction model, the hedonic motivation construct was regarded as an important predictor and was integrated into the UTAUT2 for more stressing utility. The price value construct was also introduced in the UTAUT2 model because product quality, cost, and price will influence adoption decisions [35]. Venkatesh et al. [4] also considered that the recent studies have stressed the roles of behavior intention; they thus incorporated a new construct of habit into the UTAUT2. The introduction of the habit construct was due to the following two reasons. First, the habit is regarded as prior behavior [36]. Second, the habit can be defined as the degree to which people believe the behavior to be automatic [37]. These new added constructs were verified constantly in previous researches as the critical determinants for users' technology adoptions. Therefore, such constructs can be used in the investigations of users' adoption of Phablets.

The prior model of the UTAUT has been used to describe users' technology adoption behavior in organizational context [34]. Instead, the UTAUT2 model was extended from the UTAUT and was focused on individual perspectives in technology adoptions. The new model was significantly an enhanced one for explaining variances in users' technology intention. Since the purpose of this research is to explore the possible factors influencing individual users' adoptions of Phablets, the UTAUT2 framework can provide more insights and, thus, will be adopted as the research model of this work.

2.5. Research Model. Researchers have summarized purchase and usage behaviors of consumers by using the TPB model, TAM model, and UTAUT model [38–40]. The UTAUT2 model will be introduced as the theoretic foundation of the research model to explore the purchase behavior toward Phablets (Figure 2). After reviewing the related TAM theory and UTAUT, this section will propose an analytic framework based on the UTAUT2 being discussed above. The prediction model will be used to explore the influence relationships between the constructs, which include the performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, and behavioral intention. Following, the constructs will be introduced.

2.5.1. Performance Expectancy. The performance expectancy, an important construct for the behavior intention in the UTAUT or UTAUT2 models, means the extent to which the usage of a new technology or a new technology product can provide consumers the benefits in performing specific activities [4]. The performance expectancy construct consists of four criteria: the perceived usefulness, the extrinsic motivation, the job fit, and the relative advantage. (1) Perceived usefulness: The perceived usefulness is defined as the extent to which people believe that using a new technology can improve their job performance [41]. (2) Extrinsic motivation: the extrinsic motivation is the perceptions whether people would like to perform an activity when such an activity is perceived to be instrumental in achieving valued outcomes that are different from the activity itself (Chong [42] and Teo et al. [43] defined). (3) Job fit: Thompson et al. [44] and Jeng and Tzeng [45] articulated that the job fit is how the capabilities of a new technology will increase people's job performance. (4) Relative advantage: Rogers [3] stated that relative advantage refers to the benefit of adopting a new technology or a technology product compared to the costs.

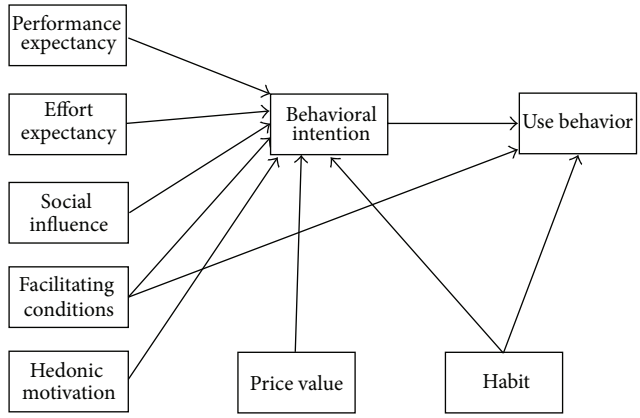


Figure 2: Research model.

The Phablet users expect the product performance to enhance their job performance. Such smart mobile devices have been developed to satisfy customers' needs to improve the job performance. Moreover, most of the consumers used smart phones as a communication tool in general and an entertainment tool specially. Based on this reason, performance expectancy impacts the behavioral intention to use Phablet.

2.5.2. Effort Expectancy. Effort expectancy refers to the degree of the ease of use, which is associated with the usage of a new technology or a technology product [4]. The construct is similar to the perceived ease of use variable of the TAM or the ease of use variable and the complexity variable which belongs to the diffusion of innovation theory. In the technology adoption context, the effort and the performance expectancies are the most important determinants for analyzing the technology usage behavior and the behavioral intention [41, 44, 46, 47]. According to literature review results, the effort expectancy construct consists of three criteria: the perceived ease of use, the complexity, and the ease of use. (1) Perceived ease of use: the perceived ease of use refers to the degree to which people believe that using a technology would be free of effort [34]. (2) Ease of use: in comparison to the perceived ease of use, the ease of use is defined as the degree to which using an innovative technology or product is identified as being difficult or easy to use [45, 48]. Rogers [3] indicated that complexity is the degree to which an innovative technology is identified as relatively difficult to use and understand. The complexity of new technology would have negative impacts on its acceptance rate [3]. In accordance with previous empirical studies, which has been demonstrated that effort expectancy would influence the consumers' attitude of use in both mandatory and voluntary usage [4, 34, 48].

2.5.3. Social Influence. Researches have broadly explored the concepts of the social influence and proved the influences of the social influence on shaping users' behaviors. For instance, Rogers [3] indicated that the users' decision making process of adopting an innovative technology is influenced by the social notion beyond an individual's decision thinking. In general, the social influence can be classified into two parts: the social norms and the critical mass. The social norms include two different influences: the informational influence and the normative influence. The informational influence refers to people's obtaining of information from other people. The normative influence refers to a user's conformation to the expectation of other people to gain a reward or avoid a punishment [49]. Venkatesh et al. [34] defined social influence as the degree of importance being recognized by others to use a novel technology. The social influence construct consists of three variables: the subjective norm, the social factor, and the image. (1) Subjective norm: the subjective norm is the perceived social pressure to perform or not to perform the behavior [50]. In this research, the subjective norm is the perceived social pressure to use Phablets. (2) Social factor: the social factor is an individual's internalization from the social system's subjective culture and particular interpersonal agreements that the individual in particular social situation has made with others [51]. (3) Image: the image is defined as the degree to which an individual identifies that the using of an innovative technology can enhance an individual's status in his or her social organization [48]. Drawing the above literature review, the usage of an innovative product can be determined by the behavioral intention.

2.5.4. Facilitating Conditions. The facilitating conditions construct is defined as the degree to which a person believes that an organization and a technical infrastructure exist to support the usage of a system [34]. Previous researches on factors influencing acceptance of some specific technology have exhibited that facilitating conditions have a significant impact on innovative technology adoptions and usage behaviors [34, 44, 46, 48, 52–54]. These researches summarized that the facilitating conditions are strong predictors, which can be used for forecasting technology acceptances and usages.

2.5.5. Hedonic Motivation. The hedonic motivation is defined as the motivation to do something due to the internal satisfaction [55]. From the hedonic perspective of individual behaviors, the hedonic motivation is related to the essence of individual's psychological and emotive experiences which can be triggered by both the individual traits and the cognitive states [56]. Based on prior studies, Magni et al. [56] explored the relationships between consumers and technology products by analyzing consumers' intention. To explore consumers' purchase motivations, Magni et al. developed and tested a model to examine the effect of hedonic motivations. Besides, similar to the flow theory, many of former empirical studies have demonstrated that hedonic experiences and traits will influence consumer technology acceptances from both individual and organizational contexts [57–60]. In other words, individual's hedonic experience of using a technology product such as a Phablet is more likely to perform experimental behavior.

2.5.6. Price Value. The price value construct originated from the perceived value, which is often regarded as an important indicator in predicting the purchase behavior which can influence a company's competitive advantage [61, 62]. Traditionally, the definition of the price value is a trade-off between benefits and sacrifices [63]. Recently, the price value has been emphasized by the researchers in the information technology fields and the marketers of consumer-electronics devices. The concept was adopted to analyze users' adoption of emerging technologies or smart mobile devices. The findings indicated that the price value concept is crucial in attracting consumers [64–66]. The price value is positive when the benefits of using a technology are identified to be greater than the monetary costs. Such price value has a positive impact on intentions [4].

Based on these ideas, Venkatesh et al. [4] described the price value as consumers' cognitive tradeoffs between the perceived benefits of the applications and monetary costs for using them [67]. In the marketing context, the price value encompasses two perspectives: monetary costs and nonmonetary costs. The monetary costs refer to the value being identified in contrast to the price paid [68]. The nonmonetary costs refer to the value being identified in return for costs such as time and efforts being expended [69]. In this research, the price value combines both the monetary and nonmonetary values for exploring factors influencing consumers' acceptances of Phablets.

2.5.7. Habit. The habit construct has been broadly discussed in a variety of domains, such as psychology, consumers' purchase behaviors, education, health science, and management. Triandis [51] derived the relationship between attitude and behavior, where behavioral intention is postulated to forecast user behavior to the extent that the habit component is weak, when habit is strong. Aarts et al. [70] found that the habit strength attenuates the amount of information being acquired before the decision is made. Limayem et al. [37] and Venkatesh et al. [4] defined the habit as the degree to which consumers tend to perform the usage of technologies or the usage of technology products behaviors automatically because of learning. The habit construct consists of three criteria: the past behavior, the reflex behavior, and the individual experience. The past behavior is described as users' prior behaviors [37]. The reflex behavior refers to users' behavior sequence or customs which are regular parts of the daily life [37]. The individual experience refers to the accumulation of experiences from users' established stable routines, norms, and habits for using technology products. Such experiences decreased the needs for discussions, coordination, or effortful decision making [37]. Researches on habitual intentions and habitual usage behaviors have demonstrated that the habit is a strong predictor of technology usages in promoting behavioral changes [4, 62, 71, 72].

2.5.8. Behavioral Intention. Social psychologists have broadly explored behavioral intentions and the relations to future

behavior [70]. Behavioral intention refers to the degree to which a person has formulated conscious plans to perform or not perform some specified future behavior(s) [70]. Behavioral intention was frequently measured as the conative loyalty, which is an important goal in marketing [73]. In the marketing context, the loyalty is defined as what customers are willing to repurchase a product from the company and support the company with positive word-of-mouth communications [71]. For marketers and manufacturers of Phablets, such outcomes are very important as members become agents for the firms, encouraging friends and acquaintances to purchase their products. However, predictions of actual purchase behaviors are always difficult. Despite this, many of the prior studies have still proven that the behavioral intention plays a significant role in actual behaviors [74]. In this research, to investigate the factors influencing consumers' acceptances of Phablets, the repurchase intention, the positive word-of-mouth communications, and the service quality are selected as the criteria for exploring the consumers' behavioral intentions.

2.5.9. Performance Expectancy. A great number of researches revealed that past behaviors will influence future behaviors. Some researchers have further proven that past usage behaviors are the antecedents of future behaviors [75]. In order to derive the factors influencing consumers' acceptances of Phablets, three factors will be introduced as the criteria of the usage behaviors. The factors include the usage time, the usage frequency, and the usage variety. Venkatesh et al. [4] indicated that the usage behavior construct should be measured by both the variety and the frequency. Mathieson [76] and Al-Gahtani et al. [77] also indicated that the usage behavior construct consists of four dimensions for measuring the technology usage: (1) the amount of time being spent in using technology products per day, (2) the usage frequency of technology products, (3) the number of various software applications being used, and (4) the number of various job tasks being supported through technology product usages. In this research, the usage time, usage frequency, and the number of various job tasks being supported will be introduced.

The constructs being summarized based on literature review results being demonstrated above are demonstrated in Table 2. The research model comprises of night constructs: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, behavioral intention, and use behavior. In the later empirical study Section 4, the influence relationships among the constructs will be established.

Table 2: Dimensions and criteria for analyzing users' Phablet acceptance.

Dimensions	Criteria
Performance expectancy (D_1)	Perceived usefulness (c_{11})
	Extrinsic motivation (c_{12})
	Job fit (c_{13})
	Relative advantage (c_{14})
Effort expectancy (D_2)	Perceived ease of use (c_{21})
	Complexity (c_{22})
	Ease of use (c_{23})
Social influence (D_3)	Subjective norm (c_{31})
	Social factor (c_{32})
	Image (c_{33})
Facilitating conditions (D_4)	Perceived behavioral control (c_{41})
	Facilitating conditions (c_{42})
	Compatibility (c_{43})
Hedonic motivations (D_5)	Enjoyment (c_{51})
	Interest (c_{52})
	Curiosity (c_{53})
Price value (D_6)	Quality (c_{61})
	Value (c_{62})
	Price (c_{63})
Habit (D_7)	Past behavior (c_{71})
	Reflex behavior (c_{72})
	Individual experience (c_{73})
Use intention (D_8)	Repurchase intentions (c_{81})
	Positive word-of-mouth communication (c_{82})
	Service quality (c_{83})
Use behavior (D_9)	Usage time (c_{91})
	Usage frequency (c_{92})
	Use variety (c_{93})

3. Research Methods

To construct the analytic framework for deriving factors for predictions of users' acceptances of Phablets, this research reviewed the related research works of social psychology and literature being related to factors for predicting users' adoption of technology such as the UTAUT and the UTAUT2 for collecting the possible dimensions and criteria. Next, the DEMATEL method is employed to establish the causal relationships. Then, the DNP will be applied to derive the influence weights based on the lead users' perspectives. In summary, the assessment model consists of three main steps: (1) deriving the requirement by literature review, (2) structuring the causal relationship based on lead users' opinion by applying DEMATEL, and (3) evaluating the weights versus each criterion by using the DNP.

3.1. Modified Delphi Method. The Delphi method was designed by Dalkey and Helmer [78]. After the Delphi method, Murry and Hammons [79] tried to identify issues and problems that were collected from a group of technology education professionals using the modified Delphi technique. The modified Delphi simplified the step of conducting the first round of a survey and replaced the conventionally adopted open style survey [80]. The purpose of the modified Delphi method is to save time (the experts can focus on research themes, eliminating the need for speculation on the open questionnaire) and to improve the response of the

main topic [80, 81]. Following, the introduction to Delphi and the modified Delphi methods is mainly based on the works by Jones and Hunter [82], Murry and Hammons [79], and Huang et al. [83, 84].

The primary objective of a Delphi inquiry is to obtain a consensus as a minimum of 75 percent agreement on any particular item of opinion from a group of respondents. Meanwhile, it is possible to develop consensus on a common core of management assessment criteria which, when combined with the institution-, unit-, and position-specific criteria, can form a comprehensive management audit instrument.

The Delphi method originated in a series of studies conducted by the RAND Corporation in the 1950s [82]. The objective was to develop a technique to obtain the most reliable consensus from a group of experts [78]. Delphi may be characterized as a method for structuring a group communication process; so the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem while researchers have developed variations of the method since its introduction [85]. Specific situations have included a round in which the participants meet to discuss the process and resolve any uncertainties or ambiguities in the wording of the questionnaire [82]. The Delphi method proceeds in a series of communication rounds as follows.

Round 1. Either the relevant individuals are invited to provide opinions on a specific matter, based upon their knowledge and experience, or the team undertaking the Delphi expresses opinions on a specific matter and selects suitable experts to participate in subsequent questionnaire rounds; these opinions are grouped together under a limited number of headings, and statements are drafted for circulation to all participants through a questionnaire [82].

Round 2. Participants rank their agreement with each statement in the questionnaire; the rankings then are summarized and included in a repeat version of the questionnaire [82].

Round 3. Participants rerank their agreement with each statement in the questionnaire and have the opportunity to change their score, in view of the group's response. The rerankings are summarized and assessed for their degree of consensus: if an acceptable degree of consensus is obtained, the process may cease, with the final results then fed back to the participants; if it is not, this third round is repeated [82].

Murry and Hammons [79] modified the traditional Delphi Technique by eliminating the first-round questionnaire containing unstructured questions. It is simplified to replace the conventionally adopted open style survey; doing so is commonly referred to as the modified Delphi method [80]. The modified Delphi technique is similar to the full Delphi in terms of procedure (i.e., a series of rounds with selected experts) and intent (i.e., to predict future events and to arrive at consensus). The major modification consists of beginning the process with a set of carefully selected items. These preselected items may be drawn from various sources including related competency profiles, synthesized reviews of the literature, and interviews with selected content experts. The primary advantages of this modification to the Delphi are that it (a) typically improves the initial round response rate and (b) provides solid grounding in previously developed work.

Additional advantages related to the use of the modified Delphi technique include reducing the effects of bias due to group interaction, assuring anonymity, and providing controlled feedback to participants [86, 87]. Brooks [88] noted that three mailings are usually sufficient in order to arrive at consensus.

3.2. The DNP. The DNP, the DEMATEL technique combining with ANP, was proposed by Tzeng [89, 90]. The DEMATEL technique was developed by the Battelle Geneva Institute (1) to analyze complex "real-world problems" dealing mainly with interactive map-model techniques [91] and (2) to evaluate qualitative and factor-linked aspects of societal problems. The DNP advanced the tradition decision making framework by manipulating the DEMATEL and the ANP individually where a single round of survey of experts' opinions would be enough for resolving a decision making problem. In comparison to the traditional approach consisting of two rounds of expert opinion surveys, the DNP actually eases the survey procedure. The DEMATEL technique was developed with the belief that the pioneering and proper use of scientific research methods could help to illuminate specific and intertwined phenomena and contribute to the recognition of practical solutions through a hierarchical structure. DEMATEL has been successfully applied in many situations such as e-business model definitions [92, 93], policy definitions [83], and global manufacturing system optimization [94]. The ANP is general form of the analytic hierarchy process (AHP) [95] which has been used in multicriteria decision making (MCDM) to be able to release the restriction of hierarchical structure.

Combining the DEMATEL and ANP method, which had been reviewed in this section, the steps of this method can be summarized as follows.

Step 1. Calculate the direct-influence matrix by scores. Based on experts' opinions, evaluations are made of the relationships among elements (or variables/attributes) of mutual influence using a scale ranging from 1 to 5, with scores representing "no influence" (1), "low influence" (2), "medium influence" (3), "high influence" (4), and "very high influence" (5). They are asked to indicate the direct effect they believe a factor will have on factor j, as indicated by d_{ij}. The matrix $\mathbf{D}$ of direct relations can be obtained.

Step 2. Normalize the direct-influence matrix based on the direct-influence matrix $\mathbf{D}$; the normalized direct relation matrix $\mathbf{N}$ is acquired by using

$$\mathbf{N} = v\mathbf{D};$$

$$v = \min\left\{\frac{1}{\max_i \sum_{j=1}^{n} d_{ij}}, \frac{1}{\max_j \sum_{i=1}^{n} d_{ij}}\right\}, \quad i, j \in \{1, 2, \ldots, n\}. \tag{1}$$

Step 3. Attaining the total-influence matrix **T**: once the normalized direct-influence matrix **N** is obtained, the total-influence matrix **T** of NRM can be obtained:

$$\mathbf{T} = \mathbf{N} + \mathbf{N}^2 + \cdots + \mathbf{N}^k = \mathbf{N}(\mathbf{I} - \mathbf{N})^{-1}, \tag{2}$$

where **T** is the total influence-related matrix; **N** is a direct influence matrix and $\mathbf{N} = [x_{ij}]_{n\times n}$; $\lim_{k\to\infty}(\mathbf{N}^2 + \cdots + \mathbf{N}^k)$ stands for an indirect influence matrix and $0 \le \sum_{j=1}^{n} x_{ij} < 1$ or $0 \le \sum_{i=1}^{n} x_{ij} < 1$, and only one $\sum_{j=1}^{n} x_{ij}$ or $\sum_{i=1}^{n} x_{ij}$ equal to 1 for $\forall i, j$. So $\lim_{k\to\infty}\mathbf{N}^k = [\mathbf{0}]_{n\times n}$. The (i, j) element t_{ij} of matrix denotes the direct and indirect influences of factor i on factor j.

Step 4. Analyze the result. In this stage, the row and column sums are separately denoted by **r** and **c** within the total-relation matrix **T** through

$$\mathbf{T} = \left[t_{ij}\right], \quad i, j \in \{1, 2, \ldots, n\}, \tag{3}$$

$$\mathbf{r} = \left[r_i\right]_{n\times 1} = \left[\sum_{j=1}^{n} t_{ij}\right]_{n\times 1}, \tag{4}$$

$$\mathbf{c} = \left[c_j\right]_{1\times n} = \left[\sum_{i=1}^{n} t_{ij}\right]_{1\times n}, \tag{5}$$

where the **r** and **c** vectors denote the sums of the rows and columns, respectively.

Suppose r_i denotes the row sum of the ith row of matrix **T**. Then, r_i is the sum of the influences dispatching from factor i to the other factors, both directly and indirectly. Suppose that c_j denotes the column sum of the jth column of matrix. Then, c_j is the sum of the influences that factor i is receiving from the other factors. Furthermore, when $i = j$ (i.e., the sum of the row sum and the column sum) $(r_i + c_i)$ represents the index representing the strength of the influence, both dispatching and receiving, $(r_i + c_i)$ is the degree of the central role that factor i plays in the problem. If $(r_i - c_i)$ is positive, then factor i primarily is dispatching influence upon the strength of other factors, and if $(r_i - c_i)$ is negative, then factor i primarily is receiving influence from other factors [83, 96]. Therefore, a causal graph can be achieved by mapping the dataset of $(r_i + s_i, r_i - s_i)$ providing a valuable approach for decision making (see Phillips-Wren et al. [90]).

Now we call the total-influence matrix $\mathbf{T_C} = [t_{ij}]_{n\times n}$ obtained by criteria and $\mathbf{T_D} = [t_{ij}^D]_{n\times n}$ obtained by dimensions (clusters) from $\mathbf{T_C}$. Then we normalize the ANP weights of dimensions (clusters) by using influence matrix $\mathbf{T_D}$ as shown in Table 6.

Step 5. The original supermatrix of eigenvectors is obtained from the total-influence matrix $\mathbf{T} = [t_{ij}]$, for example, D values of the clusters in matrix $\mathbf{T_D}$, as (7), where if $t_{ij} < D$, then $t_{ij}^D = 0$ else $t_{ij}^D = t_{ij}$, and t_{ij} is in the total-influence matrix **T**. The total-influence matrix $\mathbf{T_D}$ needs to be normalized by dividing by the following formula. There, we could normalize the total-influence matrix and represent it as $\mathbf{T_D}$ (Figure 3):

$$\mathbf{T_D} = \begin{bmatrix} \frac{t_{11}^{D_{11}}}{d_1} & \cdots & \frac{t_{1j}^{D_{1j}}}{d_1} & \cdots & \frac{t_{1m}^{D_{1m}}}{d_1} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ \frac{t_{i1}^{D_{i1}}}{d_i} & \cdots & \frac{t_{ij}^{D_{ij}}}{d_i} & \cdots & \frac{t_{im}^{D_{im}}}{d_i} \\ \vdots & \vdots & & \vdots & \vdots \\ \frac{t_{m1}^{D_{m1}}}{d_m} & \cdots & \frac{t_{mj}^{D_{mj}}}{d_m} & \cdots & \frac{t_{mm}^{D_{mm}}}{d_m} \end{bmatrix} = \begin{bmatrix} \alpha_{11}^{D_{11}} & \cdots & \alpha_{1j}^{D_{1j}} & \cdots & \alpha_{1m}^{D_{1m}} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ \alpha_{i1}^{D_{i1}} & \cdots & \alpha_{ij}^{D_{ij}} & \cdots & \alpha_{im}^{D_{im}} \\ \vdots & \vdots & & \vdots & \vdots \\ \alpha_{m1}^{D_{m1}} & \cdots & \alpha_{mj}^{D_{mj}} & \cdots & \alpha_{mm}^{D_{mm}} \end{bmatrix}, \tag{6}$$

where $\alpha_{ij}^{D_{ij}} = t_{ij}^{D_{ij}}/d_i$. This research adopts the normalized total-influence matrix $\mathbf{T_D}$ (hereafter abbreviated to "the normalized matrix") and the unweighted supermatrix **W** using (8) shows these influence level values as the basis of the normalization for determining the weighted supermatrix:

$$\mathbf{W}^* = \begin{bmatrix} \alpha_{11}^{D_{11}} \times \mathbf{W_{11}} & \alpha_{21}^{D_{21}} \times \mathbf{W_{12}} & \cdots & \cdots & \alpha_{m1}^{D_{m1}} \times \mathbf{W_{1m}} \\ \alpha_{12}^{D_{12}} \times \mathbf{W_{21}} & \alpha_{22}^{D_{22}} \times \mathbf{W_{22}} & \cdots & \cdots & \vdots \\ \vdots & \cdots & \alpha_{ji}^{D_{ji}} \times \mathbf{W_{ij}} & \cdots & \alpha_{mi}^{D_{mi}} \times \mathbf{W_{im}} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ \alpha_{1m}^{D_{1m}} \times \mathbf{W_{m1}} & \alpha_{2m}^{D_{2m}} \times \mathbf{W_{m2}} & \cdots & \cdots & \alpha_{mm}^{D_{mm}} \times \mathbf{W_{mm}} \end{bmatrix}. \tag{7}$$

Step 6. Limit the weighted supermatrix by raising it to sufficiently large power k, as (8), until the supermatrix has converged and become a long-term stable supermatrix to get the global priority vectors or called ANP weights:

$$\lim_{k\to\infty} \left(\mathbf{W}^*\right)^k. \tag{8}$$

According to the definition by Lu et al. [97], the significant confidence level can be calculated by

$$\frac{1}{n^2}\sum_{i=1}^{n}\sum_{j=1}^{n} \frac{\left|t_{ij}^{p} - t_{ij}^{p-1}\right|}{t_{ij}^{p}} \times 100\%, \tag{9}$$

where n denotes the number of criteria, p denotes to the number of experts, and t_{ij}^p is the average influence of criterion i on criterion j.

Table 3: The evaluative results of dimensions based on fifteen experts by modified Delphi method.

Gender	Work Experience	Dimensions								
		Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Hedonic motivations	Price value	Habit	Use intention	Use behavior
Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
Male	5~10	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Agree	Agree
Male	5	Agree	Agree	Disagree	Agree	Agree	Agree	Disagree	Agree	Agree
Female	10~15	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Male	15~20	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Agree	Agree
Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree
Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Male	15~20	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Male	<5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Female	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Female	<5	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
Agree		14	14	14	15	13	15	13	15	13
Disagree		1	1	1	0	2	0	2	0	2
Agree %		93.33%	93.33%	93.33%	100.00%	86.67%	100.00%	86.67%	100.00%	86.67%
Disagree %		6.67%	6.67%	6.67%	0.00%	13.33%	0.00%	13.33%	0.00%	13.33%

$$\mathbf{T_D} = \begin{bmatrix} t_{11}^{D_{11}} & \cdots & t_{1j}^{D_{1j}} & \cdots & t_{1m}^{D_{1m}} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ t_{i1}^{D_{i1}} & \cdots & t_{ij}^{D_{ij}} & \cdots & t_{im}^{D_{im}} \\ \vdots & \vdots & & \vdots & \vdots \\ t_{m1}^{D_{m1}} & \cdots & t_{mj}^{D_{mj}} & \cdots & t_{mm}^{D_{mm}} \end{bmatrix} \begin{matrix} \longrightarrow d_1 = \sum_{j=1}^{m} t_{1j}^{D_{1j}} \\ \longrightarrow d_i = \sum_{j=1}^{m} t_{ij}^{D_{ij}} \\ \longrightarrow d_m = \sum_{j=1}^{m} t_{mj}^{D_{mj}} \end{matrix}, \quad d_i = \sum_{j=1}^{m} t_{ij}^{D_{ij}}, \; i = 1, \ldots, m$$

Figure 3

4. Empirical Study

In this section, the background of Phablet will be discussed in Section 4.1. Then, the factors for predicting consumers' preferences toward the Phablet will be summarized and confirmed by experts using the modified Delphi method in Section 4.2. In Section 4.3, the DEMATEL method will be used to construct the causal network. Then, the influence weights versus each dimension and criterion will be derived by the DNP.

4.1. Industry Background and Research Problem Description. The rapid emergence of smart mobile devices pushes demands. More and more customers need a smart phone with a large screen. Thus, the integrated device consists of features of both smart phones and tablet PCs. Such a concept was first realized by Samsung, which released the Galaxy Note, the first commercialized Phablet.

According to the forecasts being provided by the Statista, the worldwide Phablet shipment will reach 203.7 million units in 2017, from 35.1 million units in 2013. Thus, the Phablet manufacturers should initiate the focus on design, marketing, and product improvement of Phablet products. Those companies which can dominate the Phablet market may obtain considerable benefits. Nevertheless, very few academic studies researched on factors influencing consumers' acceptances of Phablets. Further, exploring consumer behaviors in the acceptance of some specific product is always a crucial task for Phablet manufacturers and marketers [98, 99].

Kotler and Keller [99] argued that the consumer purchase behavior is often involved with various factors, such as simple, unexpected, concrete, credibility, emotion, and stories. Those factors always influence the purchase behavior. Consumer electronics firms also understand the importance of factors influencing consumers' purchase of their products. Thus, investigating these factors and predicting consumers' purchase motivation have become indispensable tasks.

4.2. Deriving Factors for Phablet Acceptances by the Modified Delphi Method. In order to derive the most suitable criteria

Table 4: The evaluative results of criteria based on the modified Delphi method.

(a)

#	Gender	Years of work experience	Criteria									
			Perceived usefulness	Extrinsic motivation	Job fit	Relative advantage	Perceived ease of use	Complexity	Ease of use	Subjective norm	Social factor	Image
1	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
2	Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
3	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Disagree
4	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
5	Male	5	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
6	Female	10~15	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
7	Male	15~20	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
8	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Disagree
9	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
10	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
11	Male	10~15	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree
12	Male	15~20	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
13	Male	<5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
14	Female	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
15	Female	<5	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
	Agree		15	13	12	15	15	15	15	15	12	12
	Disagree		0	2	3	0	0	0	0	0	3	3
	Agree %		100.00%	86.67%	80.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.00%	80.00%
	Disagree %		0.00%	13.33%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	20.00%

(b)

#	Gender	Years of work experience	Criteria								
			Perceived behavioral control	Facilitating conditions	Compatibility	Enjoyment	Interest	Curiosity	Quality	Value	Price
1	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
2	Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
3	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
4	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
5	Male	5	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree
6	Female	10~15	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
7	Male	15~20	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
8	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
9	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
10	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
11	Male	10~15	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Disagree
12	Male	15~20	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree
13	Male	<5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
14	Female	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
15	Female	<5	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree
	Agree		15	13	12	15	15	15	15	15	12
	Disagree		0	2	3	0	0	0	0	0	3
	Agree %		100.00%	86.67%	80.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.00%
	Disagree %		0.00%	13.33%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%

Table 5: The evaluative results of criteria based on the modified Delphi method.

#	Gender	Years of work experience	Criteria								
			Past behavior	Reflex behavior	Individual experience	Repurchase intentions	Positive word-of-mouth communication	Service quality	Usage time	Usage frequency	Use variety
1	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
2	Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
3	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
4	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
5	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
6	Female	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
7	Male	15~20	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
8	Male	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
9	Female	5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
10	Male	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
11	Male	10~15	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
12	Male	15~20	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree
13	Male	<5	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
14	Female	5~10	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
15	Female	<5	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree
Agree			15	15	14	15	15	15	15	15	15
Disagree			0	0	1	0	0	0	0	0	0
Agree %			100.00%	100.00%	93.33%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Disagree %			0.00%	0.00%	6.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

for predicting acceptances of Phablets, 28 possible criteria will first be derived from the literature review results. Those criteria will then be confirmed based on the modified Delphi method. Based on the modified Delphi method, 75% was recognized as a minimum percentage of agreement for each criterion [100]. Tables 3–5 verified the percentage of agreement of the nine dimensions and twenty-eight criteria by experts. All of the dimensions and criteria exceeding 75% are recognized by experts as suitable for analyzing adoptions of Phablets. Then, the factors being suitable for predicting Phablets can be derived.

The average initial direct influence matrix **D**:

$$
\mathbf{D} = \begin{array}{c} \\ C_{11} \\ C_{12} \\ C_{13} \\ C_{14} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{31} \\ C_{32} \\ C_{33} \\ C_{41} \\ C_{42} \\ C_{43} \\ C_{51} \\ C_{52} \\ C_{53} \\ C_{61} \\ C_{62} \\ C_{63} \\ C_{71} \\ C_{72} \\ C_{73} \\ C_{81} \\ C_{82} \\ C_{83} \\ C_{91} \\ C_{92} \\ C_{93} \end{array}
\begin{array}{c}
\begin{array}{ccccccccccccccccccccccccccc}
C_{11} & C_{12} & C_{13} & C_{14} & C_{21} & C_{22} & C_{23} & C_{31} & C_{32} & C_{33} & C_{41} & C_{42} & C_{43} & C_{51} & C_{52} & C_{53} & C_{61} & C_{62} & C_{63} & C_{71} & C_{72} & C_{73} & C_{81} & C_{82} & C_{83} & C_{91} & C_{92} & C_{93}
\end{array} \\
\begin{bmatrix}
0.000 & 4.467 & 4.533 & 4.200 & 3.533 & 2.667 & 3.867 & 3.000 & 3.067 & 2.800 & 4.667 & 3.533 & 2.933 & 3.667 & 3.933 & 2.800 & 2.933 & 4.133 & 3.400 & 3.000 & 3.800 & 3.267 & 4.733 & 4.667 & 2.667 & 4.467 & 4.400 & 4.267 \\
4.133 & 0.000 & 4.667 & 3.933 & 3.067 & 2.133 & 3.467 & 3.067 & 2.933 & 3.000 & 2.667 & 2.867 & 2.467 & 2.867 & 2.867 & 2.467 & 2.533 & 3.867 & 3.267 & 2.533 & 2.467 & 3.133 & 4.067 & 4.133 & 2.200 & 4.067 & 4.467 & 3.667 \\
3.933 & 3.667 & 0.000 & 4.133 & 3.067 & 2.467 & 3.333 & 3.067 & 2.800 & 2.733 & 3.667 & 2.467 & 2.400 & 3.067 & 2.933 & 2.000 & 2.467 & 3.600 & 2.400 & 2.200 & 2.267 & 2.333 & 3.667 & 3.667 & 2.333 & 3.467 & 3.733 & 3.533 \\
3.800 & 4.467 & 4.200 & 0.000 & 2.333 & 2.267 & 2.600 & 4.067 & 4.067 & 4.267 & 2.467 & 2.200 & 1.867 & 3.667 & 3.533 & 3.867 & 3.733 & 4.667 & 3.800 & 2.667 & 2.267 & 2.800 & 4.067 & 3.533 & 2.867 & 3.267 & 3.400 & 3.133 \\
4.400 & 3.133 & 4.067 & 3.467 & 0.000 & 4.200 & 4.467 & 3.200 & 3.000 & 3.000 & 4.467 & 2.933 & 3.333 & 4.067 & 4.000 & 4.000 & 3.200 & 4.400 & 2.800 & 2.333 & 3.600 & 2.933 & 4.467 & 4.333 & 2.200 & 3.467 & 3.467 & 3.600 \\
3.333 & 3.200 & 3.600 & 3.800 & 4.733 & 0.000 & 4.200 & 2.667 & 2.667 & 2.533 & 4.000 & 3.600 & 3.667 & 3.533 & 3.600 & 3.533 & 3.467 & 3.200 & 2.467 & 1.867 & 3.267 & 2.333 & 3.933 & 4.200 & 2.067 & 2.733 & 3.067 & 2.600 \\
4.867 & 3.533 & 3.800 & 4.067 & 3.733 & 3.867 & 0.000 & 3.600 & 3.333 & 3.267 & 4.333 & 3.467 & 3.067 & 4.400 & 4.267 & 4.400 & 3.800 & 4.600 & 3.667 & 2.133 & 3.933 & 2.867 & 4.867 & 4.733 & 2.600 & 3.667 & 3.667 & 3.800 \\
2.733 & 2.867 & 2.867 & 2.667 & 2.600 & 1.800 & 2.600 & 0.000 & 2.800 & 2.267 & 2.267 & 3.067 & 2.133 & 2.600 & 2.600 & 2.867 & 2.200 & 2.800 & 2.133 & 2.800 & 2.800 & 2.733 & 4.000 & 4.000 & 3.400 & 1.733 & 1.733 & 1.733 \\
3.400 & 3.000 & 2.267 & 3.400 & 2.933 & 1.800 & 2.933 & 3.933 & 0.000 & 3.467 & 2.533 & 3.667 & 2.600 & 3.867 & 3.800 & 4.133 & 3.600 & 4.333 & 3.800 & 2.533 & 2.800 & 3.067 & 3.733 & 3.733 & 3.267 & 2.667 & 2.667 & 2.267 \\
2.933 & 2.933 & 1.933 & 2.733 & 2.933 & 1.733 & 2.933 & 2.933 & 3.467 & 0.000 & 1.800 & 2.800 & 2.333 & 4.000 & 3.667 & 3.867 & 3.267 & 4.000 & 3.200 & 2.733 & 2.733 & 2.933 & 3.400 & 3.400 & 2.933 & 2.267 & 2.267 & 2.267 \\
4.200 & 3.800 & 3.667 & 3.333 & 3.333 & 2.467 & 3.333 & 2.200 & 2.333 & 2.333 & 0.000 & 2.933 & 3.333 & 4.067 & 4.067 & 3.600 & 3.400 & 3.600 & 2.600 & 2.733 & 3.933 & 2.867 & 3.800 & 3.800 & 2.733 & 3.933 & 4.067 & 4.133 \\
3.133 & 2.867 & 3.067 & 3.000 & 2.867 & 2.867 & 3.200 & 2.933 & 2.933 & 2.333 & 3.067 & 0.000 & 2.933 & 3.600 & 3.467 & 3.133 & 2.400 & 3.200 & 2.133 & 2.533 & 3.067 & 2.800 & 3.000 & 3.267 & 3.133 & 2.933 & 2.667 & 2.533 \\
3.267 & 3.000 & 2.933 & 2.800 & 2.600 & 2.200 & 2.667 & 2.267 & 2.133 & 2.267 & 4.733 & 4.867 & 0.000 & 2.933 & 2.733 & 2.733 & 2.467 & 2.800 & 2.000 & 1.867 & 3.533 & 2.133 & 2.933 & 2.800 & 2.400 & 2.333 & 2.400 & 2.133 \\
4.600 & 4.067 & 4.133 & 3.533 & 4.200 & 3.933 & 3.933 & 3.200 & 3.667 & 3.533 & 4.600 & 4.067 & 2.800 & 0.000 & 4.267 & 4.333 & 3.667 & 4.000 & 2.733 & 2.400 & 3.600 & 3.533 & 4.333 & 4.200 & 3.200 & 4.333 & 4.333 & 4.467 \\
4.533 & 3.933 & 4.200 & 3.467 & 4.200 & 3.933 & 4.333 & 3.267 & 3.267 & 3.067 & 4.600 & 4.067 & 2.800 & 4.333 & 0.000 & 4.600 & 3.533 & 3.867 & 2.733 & 2.333 & 3.333 & 3.200 & 4.200 & 4.200 & 3.200 & 4.400 & 4.267 & 4.333 \\
4.333 & 4.000 & 4.067 & 3.600 & 2.867 & 2.867 & 3.000 & 2.600 & 3.133 & 3.000 & 3.533 & 3.267 & 2.667 & 4.200 & 4.000 & 0.000 & 2.867 & 4.000 & 2.800 & 2.400 & 3.333 & 3.200 & 3.667 & 3.933 & 3.200 & 3.133 & 3.200 & 4.000 \\
4.867 & 3.933 & 3.800 & 4.600 & 3.533 & 3.067 & 3.933 & 4.333 & 3.533 & 4.200 & 3.333 & 3.800 & 4.000 & 4.333 & 4.200 & 4.733 & 0.000 & 4.867 & 4.733 & 1.933 & 2.600 & 2.200 & 4.800 & 4.867 & 3.733 & 3.667 & 3.933 & 3.667 \\
4.333 & 4.200 & 3.800 & 3.867 & 3.800 & 3.067 & 3.933 & 4.333 & 3.733 & 4.067 & 3.067 & 3.400 & 3.533 & 4.533 & 4.267 & 4.533 & 4.133 & 0.000 & 4.733 & 2.067 & 3.000 & 2.200 & 4.667 & 4.800 & 3.933 & 4.200 & 4.333 & 4.200 \\
3.467 & 2.667 & 2.667 & 2.667 & 2.333 & 2.267 & 2.467 & 3.467 & 3.467 & 3.467 & 2.467 & 2.733 & 3.067 & 3.400 & 3.400 & 4.200 & 4.800 & 4.467 & 0.000 & 1.800 & 2.267 & 1.600 & 3.733 & 3.400 & 3.733 & 1.933 & 2.133 & 1.867 \\
4.600 & 4.067 & 3.667 & 3.933 & 4.467 & 3.933 & 4.600 & 3.200 & 2.800 & 2.533 & 3.933 & 3.533 & 4.200 & 3.533 & 3.533 & 3.800 & 3.333 & 3.467 & 2.400 & 0.000 & 3.467 & 4.800 & 4.533 & 4.133 & 2.400 & 3.467 & 3.800 & 3.200 \\
4.733 & 3.667 & 3.800 & 3.933 & 4.467 & 3.933 & 4.600 & 3.200 & 2.533 & 2.667 & 4.067 & 3.533 & 4.200 & 4.067 & 3.933 & 3.533 & 3.933 & 4.600 & 3.200 & 1.600 & 0.000 & 4.600 & 4.600 & 4.467 & 2.400 & 4.533 & 4.867 & 4.467 \\
4.467 & 4.067 & 4.067 & 3.800 & 4.600 & 4.067 & 4.733 & 3.200 & 2.533 & 2.933 & 4.200 & 3.533 & 4.200 & 3.800 & 3.533 & 3.533 & 3.800 & 3.467 & 2.600 & 1.533 & 3.400 & 0.000 & 4.933 & 4.000 & 2.467 & 4.333 & 4.600 & 4.533 \\
2.533 & 2.667 & 2.600 & 3.133 & 4.467 & 3.667 & 4.467 & 2.600 & 3.133 & 3.067 & 3.133 & 2.933 & 2.200 & 3.267 & 3.200 & 3.400 & 3.200 & 3.933 & 3.800 & 2.667 & 3.533 & 2.733 & 0.000 & 4.200 & 2.867 & 3.267 & 3.133 & 3.267 \\
3.533 & 2.867 & 3.067 & 3.333 & 4.467 & 4.000 & 4.067 & 3.333 & 3.867 & 3.667 & 3.200 & 3.200 & 2.667 & 4.067 & 3.800 & 3.800 & 3.800 & 4.667 & 3.800 & 2.533 & 3.400 & 2.800 & 4.467 & 0.000 & 2.733 & 3.333 & 3.000 & 3.267 \\
3.800 & 3.600 & 3.200 & 3.933 & 2.933 & 2.600 & 3.133 & 3.067 & 3.533 & 3.267 & 2.467 & 4.000 & 2.667 & 3.533 & 3.067 & 3.067 & 3.533 & 4.467 & 3.933 & 2.733 & 3.333 & 2.533 & 4.333 & 4.333 & 0.000 & 2.600 & 2.667 & 2.800 \\
4.133 & 3.667 & 3.733 & 3.200 & 3.667 & 3.133 & 3.933 & 2.667 & 2.733 & 2.133 & 4.200 & 3.333 & 2.933 & 4.600 & 3.800 & 3.200 & 3.800 & 3.200 & 2.800 & 4.000 & 2.933 & 4.267 & 4.467 & 2.267 & 0.000 & 4.200 & 4.133 \\
4.333 & 3.600 & 3.867 & 3.600 & 3.933 & 2.933 & 3.933 & 3.067 & 2.933 & 2.333 & 4.067 & 2.867 & 2.733 & 3.800 & 3.267 & 3.267 & 3.267 & 3.867 & 3.200 & 2.800 & 4.467 & 2.933 & 4.200 & 4.533 & 2.400 & 4.467 & 0.000 & 4.333 \\
4.267 & 3.467 & 3.733 & 4.000 & 3.267 & 3.533 & 3.133 & 2.667 & 2.600 & 2.200 & 3.400 & 3.467 & 2.933 & 4.200 & 3.667 & 3.533 & 4.267 & 4.533 & 3.667 & 2.400 & 3.600 & 2.667 & 4.400 & 4.333 & 2.733 & 3.467 & 3.333 & 0.000
\end{bmatrix}
\end{array}
\tag{10}
$$

Note. Consider $(1/(n \times (n-1))) \sum_{i=1}^{n} \sum_{j=1}^{n} (|d_{ij}^{p} - d_{ij}^{p-1}|/d_{ij}^{p}) \times 100\% = 4.823\% < 5\%$; that is, significant confidence is 95.18%, where $p = 15$ denotes the number of experts, d_{ij}^{p} is the average influence of i criterion on j, and n

denotes number of criteria, here $n = 28$ and $n \times n$ matrix.

The normalized direct influence matrix **N**:

$$\mathbf{N} = \begin{array}{c} \\ C_{11} \\ C_{12} \\ C_{13} \\ C_{14} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{31} \\ C_{32} \\ C_{33} \\ C_{41} \\ C_{42} \\ C_{43} \\ C_{51} \\ C_{52} \\ C_{53} \\ C_{61} \\ C_{62} \\ C_{63} \\ C_{71} \\ C_{72} \\ C_{73} \\ C_{81} \\ C_{82} \\ C_{83} \\ C_{91} \\ C_{92} \\ C_{93} \end{array} \begin{array}{c} \begin{array}{cccccccccccccccccccccccccccc} C_{11} & C_{12} & C_{13} & C_{14} & C_{21} & C_{22} & C_{23} & C_{31} & C_{32} & C_{33} & C_{41} & C_{42} & C_{43} & C_{51} & C_{52} & C_{53} & C_{61} & C_{62} & C_{63} & C_{71} & C_{72} & C_{73} & C_{81} & C_{82} & C_{83} & C_{91} & C_{92} & C_{93} \end{array} \\ \begin{bmatrix} 0.000 & 0.040 & 0.041 & 0.038 & 0.032 & 0.024 & 0.035 & 0.027 & 0.027 & 0.025 & 0.042 & 0.032 & 0.026 & 0.033 & 0.035 & 0.025 & 0.026 & 0.037 & 0.030 & 0.027 & 0.034 & 0.029 & 0.042 & 0.042 & 0.024 & 0.040 & 0.039 & 0.038 \\ 0.037 & 0.000 & 0.042 & 0.035 & 0.027 & 0.019 & 0.031 & 0.027 & 0.026 & 0.027 & 0.024 & 0.026 & 0.022 & 0.026 & 0.026 & 0.022 & 0.023 & 0.035 & 0.029 & 0.023 & 0.022 & 0.028 & 0.036 & 0.037 & 0.020 & 0.036 & 0.040 & 0.033 \\ 0.035 & 0.033 & 0.000 & 0.037 & 0.027 & 0.022 & 0.030 & 0.027 & 0.025 & 0.024 & 0.033 & 0.022 & 0.021 & 0.027 & 0.026 & 0.018 & 0.022 & 0.032 & 0.021 & 0.020 & 0.020 & 0.021 & 0.033 & 0.033 & 0.021 & 0.031 & 0.033 & 0.032 \\ 0.034 & 0.040 & 0.038 & 0.000 & 0.021 & 0.020 & 0.023 & 0.036 & 0.036 & 0.038 & 0.022 & 0.020 & 0.017 & 0.033 & 0.032 & 0.035 & 0.033 & 0.042 & 0.034 & 0.024 & 0.020 & 0.025 & 0.036 & 0.032 & 0.026 & 0.029 & 0.030 & 0.028 \\ 0.039 & 0.028 & 0.036 & 0.031 & 0.000 & 0.038 & 0.040 & 0.029 & 0.027 & 0.027 & 0.040 & 0.026 & 0.030 & 0.036 & 0.036 & 0.036 & 0.029 & 0.039 & 0.025 & 0.021 & 0.032 & 0.026 & 0.040 & 0.039 & 0.020 & 0.031 & 0.031 & 0.032 \\ 0.030 & 0.029 & 0.032 & 0.034 & 0.042 & 0.000 & 0.038 & 0.024 & 0.024 & 0.023 & 0.036 & 0.032 & 0.033 & 0.032 & 0.032 & 0.032 & 0.031 & 0.029 & 0.022 & 0.017 & 0.029 & 0.021 & 0.035 & 0.038 & 0.018 & 0.024 & 0.027 & 0.023 \\ 0.044 & 0.032 & 0.034 & 0.036 & 0.033 & 0.035 & 0.000 & 0.032 & 0.030 & 0.029 & 0.039 & 0.031 & 0.027 & 0.039 & 0.038 & 0.039 & 0.034 & 0.041 & 0.033 & 0.019 & 0.035 & 0.026 & 0.044 & 0.042 & 0.023 & 0.033 & 0.033 & 0.034 \\ 0.024 & 0.026 & 0.026 & 0.024 & 0.023 & 0.016 & 0.023 & 0.000 & 0.025 & 0.020 & 0.020 & 0.027 & 0.019 & 0.023 & 0.023 & 0.026 & 0.020 & 0.025 & 0.019 & 0.025 & 0.025 & 0.024 & 0.036 & 0.036 & 0.030 & 0.016 & 0.016 & 0.016 \\ 0.030 & 0.027 & 0.020 & 0.030 & 0.026 & 0.016 & 0.026 & 0.035 & 0.000 & 0.031 & 0.023 & 0.033 & 0.023 & 0.035 & 0.034 & 0.037 & 0.032 & 0.039 & 0.034 & 0.023 & 0.025 & 0.027 & 0.033 & 0.033 & 0.029 & 0.024 & 0.024 & 0.020 \\ 0.026 & 0.026 & 0.017 & 0.024 & 0.026 & 0.016 & 0.026 & 0.026 & 0.031 & 0.000 & 0.016 & 0.025 & 0.021 & 0.036 & 0.033 & 0.035 & 0.029 & 0.036 & 0.029 & 0.024 & 0.024 & 0.026 & 0.030 & 0.030 & 0.026 & 0.020 & 0.020 & 0.020 \\ 0.038 & 0.034 & 0.033 & 0.030 & 0.030 & 0.022 & 0.030 & 0.020 & 0.021 & 0.021 & 0.000 & 0.026 & 0.030 & 0.036 & 0.036 & 0.032 & 0.030 & 0.032 & 0.023 & 0.024 & 0.035 & 0.026 & 0.034 & 0.034 & 0.024 & 0.035 & 0.036 & 0.037 \\ 0.028 & 0.026 & 0.027 & 0.027 & 0.026 & 0.026 & 0.029 & 0.026 & 0.026 & 0.021 & 0.027 & 0.000 & 0.026 & 0.032 & 0.031 & 0.028 & 0.021 & 0.029 & 0.019 & 0.023 & 0.027 & 0.025 & 0.027 & 0.029 & 0.028 & 0.026 & 0.024 & 0.023 \\ 0.029 & 0.027 & 0.026 & 0.025 & 0.023 & 0.020 & 0.024 & 0.020 & 0.019 & 0.020 & 0.042 & 0.044 & 0.000 & 0.026 & 0.024 & 0.024 & 0.022 & 0.025 & 0.018 & 0.017 & 0.032 & 0.019 & 0.026 & 0.025 & 0.021 & 0.021 & 0.021 & 0.019 \\ 0.041 & 0.036 & 0.037 & 0.032 & 0.038 & 0.035 & 0.035 & 0.029 & 0.033 & 0.032 & 0.041 & 0.036 & 0.025 & 0.000 & 0.038 & 0.039 & 0.033 & 0.036 & 0.024 & 0.021 & 0.032 & 0.032 & 0.039 & 0.038 & 0.029 & 0.039 & 0.039 & 0.040 \\ 0.041 & 0.035 & 0.038 & 0.031 & 0.038 & 0.035 & 0.039 & 0.029 & 0.029 & 0.027 & 0.041 & 0.036 & 0.025 & 0.039 & 0.000 & 0.041 & 0.032 & 0.035 & 0.024 & 0.021 & 0.030 & 0.029 & 0.038 & 0.038 & 0.029 & 0.039 & 0.038 & 0.039 \\ 0.039 & 0.036 & 0.036 & 0.032 & 0.026 & 0.026 & 0.027 & 0.023 & 0.028 & 0.027 & 0.032 & 0.029 & 0.024 & 0.038 & 0.036 & 0.000 & 0.026 & 0.036 & 0.025 & 0.021 & 0.030 & 0.029 & 0.033 & 0.035 & 0.029 & 0.028 & 0.029 & 0.036 \\ 0.044 & 0.035 & 0.034 & 0.041 & 0.032 & 0.027 & 0.035 & 0.039 & 0.032 & 0.038 & 0.030 & 0.034 & 0.036 & 0.039 & 0.038 & 0.042 & 0.000 & 0.044 & 0.042 & 0.017 & 0.023 & 0.020 & 0.043 & 0.044 & 0.033 & 0.033 & 0.035 & 0.033 \\ 0.039 & 0.038 & 0.034 & 0.035 & 0.034 & 0.027 & 0.035 & 0.039 & 0.033 & 0.036 & 0.027 & 0.030 & 0.032 & 0.041 & 0.038 & 0.041 & 0.037 & 0.000 & 0.042 & 0.018 & 0.027 & 0.020 & 0.042 & 0.043 & 0.035 & 0.038 & 0.039 & 0.038 \\ 0.031 & 0.024 & 0.024 & 0.024 & 0.021 & 0.020 & 0.022 & 0.031 & 0.031 & 0.031 & 0.022 & 0.024 & 0.027 & 0.030 & 0.030 & 0.038 & 0.043 & 0.040 & 0.000 & 0.016 & 0.020 & 0.014 & 0.033 & 0.030 & 0.033 & 0.017 & 0.019 & 0.017 \\ 0.041 & 0.036 & 0.033 & 0.035 & 0.040 & 0.035 & 0.041 & 0.029 & 0.025 & 0.023 & 0.035 & 0.032 & 0.038 & 0.032 & 0.032 & 0.034 & 0.030 & 0.031 & 0.021 & 0.000 & 0.031 & 0.043 & 0.041 & 0.037 & 0.021 & 0.031 & 0.034 & 0.029 \\ 0.042 & 0.033 & 0.034 & 0.035 & 0.040 & 0.035 & 0.041 & 0.029 & 0.023 & 0.024 & 0.036 & 0.032 & 0.038 & 0.036 & 0.035 & 0.032 & 0.035 & 0.041 & 0.029 & 0.014 & 0.000 & 0.041 & 0.041 & 0.040 & 0.021 & 0.041 & 0.044 & 0.040 \\ 0.040 & 0.036 & 0.036 & 0.034 & 0.041 & 0.036 & 0.042 & 0.029 & 0.023 & 0.026 & 0.038 & 0.032 & 0.038 & 0.034 & 0.032 & 0.032 & 0.034 & 0.031 & 0.023 & 0.014 & 0.030 & 0.000 & 0.044 & 0.036 & 0.022 & 0.039 & 0.041 & 0.041 \\ 0.023 & 0.024 & 0.023 & 0.028 & 0.040 & 0.033 & 0.040 & 0.023 & 0.028 & 0.027 & 0.028 & 0.026 & 0.020 & 0.029 & 0.029 & 0.030 & 0.029 & 0.035 & 0.034 & 0.024 & 0.032 & 0.024 & 0.000 & 0.038 & 0.026 & 0.029 & 0.028 & 0.029 \\ 0.032 & 0.026 & 0.027 & 0.030 & 0.040 & 0.036 & 0.036 & 0.030 & 0.035 & 0.033 & 0.029 & 0.029 & 0.024 & 0.036 & 0.034 & 0.034 & 0.034 & 0.042 & 0.034 & 0.023 & 0.030 & 0.025 & 0.040 & 0.000 & 0.024 & 0.030 & 0.027 & 0.029 \\ 0.034 & 0.032 & 0.029 & 0.035 & 0.026 & 0.023 & 0.028 & 0.027 & 0.032 & 0.029 & 0.022 & 0.036 & 0.024 & 0.032 & 0.027 & 0.027 & 0.032 & 0.040 & 0.035 & 0.024 & 0.030 & 0.023 & 0.039 & 0.039 & 0.000 & 0.023 & 0.024 & 0.025 \\ 0.037 & 0.033 & 0.033 & 0.029 & 0.033 & 0.028 & 0.035 & 0.024 & 0.024 & 0.019 & 0.038 & 0.030 & 0.026 & 0.041 & 0.034 & 0.029 & 0.029 & 0.034 & 0.029 & 0.025 & 0.036 & 0.026 & 0.038 & 0.040 & 0.020 & 0.000 & 0.038 & 0.037 \\ 0.039 & 0.032 & 0.035 & 0.032 & 0.035 & 0.026 & 0.035 & 0.027 & 0.026 & 0.021 & 0.036 & 0.026 & 0.024 & 0.034 & 0.029 & 0.029 & 0.029 & 0.035 & 0.029 & 0.025 & 0.040 & 0.026 & 0.038 & 0.041 & 0.021 & 0.040 & 0.000 & 0.039 \\ 0.038 & 0.031 & 0.033 & 0.036 & 0.029 & 0.032 & 0.028 & 0.024 & 0.023 & 0.020 & 0.030 & 0.031 & 0.026 & 0.038 & 0.033 & 0.032 & 0.038 & 0.041 & 0.033 & 0.021 & 0.032 & 0.024 & 0.039 & 0.039 & 0.024 & 0.031 & 0.030 & 0.000 \end{bmatrix} \end{array}. \quad (11)$$

The normalized direct influence matrix $\mathbf{T_C}$:

$$\mathbf{T_C} = \begin{array}{c} \\ C_{11} \\ C_{12} \\ C_{13} \\ C_{14} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{31} \\ C_{32} \\ C_{33} \\ C_{41} \\ C_{42} \\ C_{43} \\ C_{51} \\ C_{52} \\ C_{53} \\ C_{61} \\ C_{62} \\ C_{63} \\ C_{71} \\ C_{72} \\ C_{73} \\ C_{81} \\ C_{82} \\ C_{83} \\ C_{91} \\ C_{92} \\ C_{93} \end{array} \begin{array}{c} \begin{array}{cccccccccccccccccccccccccccc} C_{11} & C_{12} & C_{13} & C_{14} & C_{21} & C_{22} & C_{23} & C_{31} & C_{32} & C_{33} & C_{41} & C_{42} & C_{43} & C_{51} & C_{52} & C_{53} & C_{61} & C_{62} & C_{63} & C_{71} & C_{72} & C_{73} & C_{81} & C_{82} & C_{83} & C_{91} & C_{92} & C_{93} \end{array} \\ \begin{bmatrix} 0.171 & 0.192 & 0.195 & 0.191 & 0.184 & 0.156 & 0.191 & 0.164 & 0.162 & 0.155 & 0.194 & 0.175 & 0.155 & 0.196 & 0.191 & 0.181 & 0.172 & 0.209 & 0.169 & 0.131 & 0.175 & 0.154 & 0.220 & 0.218 & 0.147 & 0.189 & 0.191 & 0.188 \\ 0.186 & 0.135 & 0.176 & 0.170 & 0.161 & 0.135 & 0.168 & 0.148 & 0.144 & 0.141 & 0.158 & 0.152 & 0.135 & 0.169 & 0.163 & 0.159 & 0.151 & 0.185 & 0.150 & 0.114 & 0.146 & 0.138 & 0.193 & 0.191 & 0.128 & 0.167 & 0.172 & 0.164 \\ 0.175 & 0.159 & 0.128 & 0.163 & 0.153 & 0.131 & 0.159 & 0.140 & 0.136 & 0.132 & 0.158 & 0.141 & 0.127 & 0.162 & 0.155 & 0.146 & 0.142 & 0.173 & 0.136 & 0.106 & 0.137 & 0.124 & 0.180 & 0.178 & 0.122 & 0.154 & 0.158 & 0.155 \\ 0.187 & 0.177 & 0.176 & 0.140 & 0.159 & 0.139 & 0.165 & 0.160 & 0.157 & 0.155 & 0.159 & 0.150 & 0.133 & 0.180 & 0.173 & 0.175 & 0.165 & 0.196 & 0.159 & 0.118 & 0.148 & 0.138 & 0.197 & 0.191 & 0.137 & 0.164 & 0.167 & 0.163 \\ 0.205 & 0.177 & 0.187 & 0.181 & 0.150 & 0.165 & 0.192 & 0.162 & 0.158 & 0.154 & 0.188 & 0.167 & 0.155 & 0.195 & 0.188 & 0.187 & 0.171 & 0.206 & 0.160 & 0.122 & 0.170 & 0.148 & 0.213 & 0.210 & 0.140 & 0.176 & 0.179 & 0.178 \\ 0.181 & 0.164 & 0.169 & 0.170 & 0.177 & 0.118 & 0.176 & 0.145 & 0.143 & 0.138 & 0.171 & 0.160 & 0.147 & 0.177 & 0.171 & 0.169 & 0.160 & 0.181 & 0.145 & 0.109 & 0.155 & 0.132 & 0.193 & 0.193 & 0.128 & 0.157 & 0.162 & 0.156 \\ 0.218 & 0.189 & 0.193 & 0.195 & 0.190 & 0.170 & 0.162 & 0.173 & 0.168 & 0.163 & 0.195 & 0.179 & 0.160 & 0.207 & 0.199 & 0.199 & 0.184 & 0.218 & 0.175 & 0.126 & 0.180 & 0.155 & 0.227 & 0.223 & 0.150 & 0.186 & 0.189 & 0.188 \\ 0.146 & 0.135 & 0.136 & 0.134 & 0.133 & 0.111 & 0.136 & 0.099 & 0.121 & 0.114 & 0.130 & 0.130 & 0.111 & 0.141 & 0.136 & 0.137 & 0.124 & 0.148 & 0.118 & 0.099 & 0.126 & 0.114 & 0.163 & 0.162 & 0.118 & 0.123 & 0.124 & 0.123 \\ 0.178 & 0.160 & 0.155 & 0.164 & 0.159 & 0.131 & 0.163 & 0.154 & 0.118 & 0.144 & 0.155 & 0.158 & 0.135 & 0.176 & 0.170 & 0.172 & 0.159 & 0.188 & 0.154 & 0.113 & 0.148 & 0.136 & 0.188 & 0.186 & 0.136 & 0.153 & 0.155 & 0.150 \\ 0.162 & 0.148 & 0.141 & 0.147 & 0.148 & 0.121 & 0.151 & 0.136 & 0.138 & 0.105 & 0.138 & 0.140 & 0.124 & 0.166 & 0.157 & 0.158 & 0.145 & 0.172 & 0.139 & 0.107 & 0.137 & 0.126 & 0.173 & 0.171 & 0.124 & 0.139 & 0.141 & 0.140 \\ 0.194 & 0.175 & 0.175 & 0.172 & 0.170 & 0.144 & 0.174 & 0.146 & 0.144 & 0.141 & 0.141 & 0.159 & 0.148 & 0.186 & 0.180 & 0.175 & 0.164 & 0.190 & 0.150 & 0.120 & 0.165 & 0.141 & 0.198 & 0.196 & 0.137 & 0.172 & 0.176 & 0.174 \\ 0.164 & 0.148 & 0.151 & 0.150 & 0.148 & 0.131 & 0.154 & 0.136 & 0.134 & 0.125 & 0.150 & 0.116 & 0.129 & 0.163 & 0.156 & 0.152 & 0.138 & 0.166 & 0.130 & 0.106 & 0.141 & 0.125 & 0.170 & 0.170 & 0.126 & 0.146 & 0.145 & 0.143 \\ 0.156 & 0.141 & 0.142 & 0.140 & 0.137 & 0.118 & 0.141 & 0.123 & 0.120 & 0.118 & 0.156 & 0.150 & 0.097 & 0.148 & 0.142 & 0.141 & 0.131 & 0.153 & 0.121 & 0.095 & 0.137 & 0.113 & 0.160 & 0.157 & 0.113 & 0.133 & 0.135 & 0.131 \\ 0.218 & 0.196 & 0.198 & 0.192 & 0.196 & 0.172 & 0.199 & 0.171 & 0.172 & 0.167 & 0.200 & 0.186 & 0.159 & 0.172 & 0.201 & 0.200 & 0.184 & 0.215 & 0.169 & 0.130 & 0.180 & 0.162 & 0.225 & 0.221 & 0.157 & 0.194 & 0.196 & 0.196 \\ 0.215 & 0.192 & 0.196 & 0.190 & 0.194 & 0.170 & 0.200 & 0.170 & 0.167 & 0.161 & 0.198 & 0.184 & 0.157 & 0.207 & 0.162 & 0.200 & 0.181 & 0.211 & 0.167 & 0.128 & 0.175 & 0.157 & 0.221 & 0.219 & 0.155 & 0.192 & 0.194 & 0.192 \\ 0.195 & 0.176 & 0.178 & 0.174 & 0.166 & 0.147 & 0.171 & 0.149 & 0.151 & 0.146 & 0.171 & 0.161 & 0.142 & 0.187 & 0.179 & 0.143 & 0.160 & 0.193 & 0.152 & 0.117 & 0.159 & 0.144 & 0.197 & 0.197 & 0.141 & 0.165 & 0.168 & 0.173 \\ 0.221 & 0.195 & 0.196 & 0.202 & 0.191 & 0.165 & 0.199 & 0.182 & 0.173 & 0.174 & 0.190 & 0.185 & 0.170 & 0.210 & 0.201 & 0.205 & 0.154 & 0.223 & 0.187 & 0.127 & 0.172 & 0.151 & 0.230 & 0.228 & 0.163 & 0.189 & 0.193 & 0.189 \\ 0.216 & 0.197 & 0.195 & 0.195 & 0.193 & 0.165 & 0.199 & 0.182 & 0.174 & 0.172 & 0.187 & 0.181 & 0.166 & 0.211 & 0.201 & 0.203 & 0.189 & 0.181 & 0.186 & 0.128 & 0.175 & 0.151 & 0.228 & 0.227 & 0.164 & 0.193 & 0.196 & 0.193 \\ 0.168 & 0.147 & 0.148 & 0.148 & 0.144 & 0.126 & 0.149 & 0.141 & 0.139 & 0.136 & 0.145 & 0.141 & 0.131 & 0.162 & 0.156 & 0.163 & 0.159 & 0.178 & 0.112 & 0.100 & 0.134 & 0.116 & 0.177 & 0.172 & 0.133 & 0.138 & 0.141 & 0.137 \\ 0.211 & 0.189 & 0.188 & 0.189 & 0.192 & 0.167 & 0.198 & 0.166 & 0.159 & 0.153 & 0.188 & 0.176 & 0.166 & 0.195 & 0.188 & 0.189 & 0.175 & 0.203 & 0.160 & 0.104 & 0.173 & 0.168 & 0.219 & 0.213 & 0.144 & 0.181 & 0.186 & 0.179 \\ 0.221 & 0.193 & 0.196 & 0.197 & 0.200 & 0.173 & 0.205 & 0.172 & 0.164 & 0.161 & 0.197 & 0.183 & 0.172 & 0.208 & 0.199 & 0.195 & 0.188 & 0.221 & 0.174 & 0.124 & 0.149 & 0.172 & 0.228 & 0.225 & 0.151 & 0.197 & 0.202 & 0.197 \\ 0.212 & 0.191 & 0.193 & 0.190 & 0.195 & 0.170 & 0.201 & 0.167 & 0.159 & 0.158 & 0.192 & 0.177 & 0.168 & 0.200 & 0.190 & 0.189 & 0.181 & 0.205 & 0.164 & 0.120 & 0.174 & 0.128 & 0.225 & 0.215 & 0.147 & 0.190 & 0.194 & 0.192 \\ 0.173 & 0.159 & 0.160 & 0.164 & 0.174 & 0.149 & 0.178 & 0.144 & 0.147 & 0.142 & 0.163 & 0.153 & 0.134 & 0.174 & 0.167 & 0.168 & 0.157 & 0.187 & 0.156 & 0.115 & 0.156 & 0.135 & 0.159 & 0.193 & 0.134 & 0.161 & 0.161 & 0.161 \\ 0.194 & 0.172 & 0.175 & 0.177 & 0.185 & 0.161 & 0.186 & 0.161 & 0.163 & 0.157 & 0.174 & 0.166 & 0.147 & 0.192 & 0.183 & 0.183 & 0.173 & 0.205 & 0.166 & 0.122 & 0.165 & 0.145 & 0.210 & 0.169 & 0.142 & 0.172 & 0.171 & 0.172 \\ 0.186 & 0.169 & 0.167 & 0.173 & 0.163 & 0.141 & 0.169 & 0.151 & 0.152 & 0.146 & 0.159 & 0.164 & 0.139 & 0.178 & 0.168 & 0.167 & 0.162 & 0.194 & 0.159 & 0.118 & 0.156 & 0.135 & 0.198 & 0.196 & 0.111 & 0.157 & 0.160 & 0.159 \\ 0.200 & 0.179 & 0.181 & 0.176 & 0.179 & 0.154 & 0.185 & 0.155 & 0.153 & 0.144 & 0.183 & 0.167 & 0.149 & 0.197 & 0.183 & 0.178 & 0.168 & 0.198 & 0.161 & 0.124 & 0.171 & 0.146 & 0.209 & 0.208 & 0.138 & 0.144 & 0.182 & 0.180 \\ 0.202 & 0.179 & 0.183 & 0.180 & 0.182 & 0.153 & 0.186 & 0.159 & 0.155 & 0.146 & 0.183 & 0.164 & 0.148 & 0.191 & 0.180 & 0.179 & 0.169 & 0.200 & 0.161 & 0.125 & 0.175 & 0.147 & 0.209 & 0.210 & 0.140 & 0.183 & 0.147 & 0.182 \\ 0.199 & 0.176 & 0.179 & 0.181 & 0.173 & 0.156 & 0.177 & 0.154 & 0.150 & 0.143 & 0.175 & 0.167 & 0.148 & 0.192 & 0.181 & 0.179 & 0.175 & 0.202 & 0.163 & 0.120 & 0.165 & 0.142 & 0.208 & 0.205 & 0.141 & 0.172 & 0.173 & 0.142 \end{bmatrix} \end{array}. \quad (12)$$

4.3. The Causal Relationships and Weight Derivations by the DNP. The DEMA is a useful method to illustrate the relationships between dimensions and criteria. Researches belonging to various fields have applied the DEMATEL to solve real-world problems. The DNP, an MCDM method being derived from the concept of the DEMATEL and the ANP, can be applied to construct the structure of a decision problem and derive weights being associated with the criteria based on the total relationship matrix being derived by DEMATEL. In this research, the DNP method will be introduced for

Table 6: $r_i + c_i$ and $r_i - c_i$ versus each dimension.

Dimensions	r_i	c_i	$r_i + c_i$	$r_i - c_i$
Performance expectancy (D_1)	1.449	1.599	3.049	−0.150
Effort expectancy (D_2)	1.548	1.488	3.036	0.060
Social influence (D_3)	1.277	1.353	2.630	−0.076
Facilitating conditions (D_4)	1.321	1.436	2.757	−0.114
Hedonic motivations (D_5)	1.601	1.605	3.206	−0.004
Price value (D_6)	1.555	1.536	3.092	0.019
Habit (D_7)	1.642	1.250	2.891	0.392
Use intention (D_8)	1.466	1.611	3.077	−0.145
Use behavior (D_9)	1.533	1.515	3.048	0.018

constructing the structure of the decision problem and derive the influence weights.

At first, the influence of each criterion on others can be derived based on 15 lead users' opinions. Initial 28 × 28 influence relation matrix **D** 28 × 28 can be constructed accordingly (refer to Figure 4). Furthermore, the significance confidence of questionnaires based on the fifteen experts' opinions can be derived by (9). The result equals 4.82%, which is less than 5%. That is, the significance confidence is 95.18%, which is greater than 95% (see total average initial direct matrix **D**). Afterwards, the direct influence matrix **D** will be normalized according to (7). The normalized direct influence matrix **N** is depicted in (11). Then, the total influence matrix **T** can be calculated based upon (3). The matrix **T** is demonstrated in (12). Meanwhile, the causal network of dimension is shown in (13). Moreover, to illustrate the causal relationship network, the r_i and c_i can be derived by using (4) and (5), which stand for the summation of row and column versus each criterion and dimension. Subsequently, the $(r_i + c_i)$ and $(r_i - c_i)$ can be derived as illustrated in Tables 6 and 7.

The total influence matrix $\mathbf{T_D}$:

$$\mathbf{T_D} = \begin{array}{c} \\ D_1 \\ D_2 \\ D_3 \\ D_4 \\ D_5 \\ D_6 \\ D_7 \\ D_8 \\ D_9 \end{array} \begin{array}{c} \begin{array}{ccccccccc} D_1 & D_2 & D_3 & D_4 & D_5 & D_6 & D_7 & D_8 & D_9 \end{array} \\ \begin{bmatrix} 0.170 & 0.158 & 0.149 & 0.153 & 0.171 & 0.167 & 0.136 & 0.175 & 0.169 \\ 0.186 & 0.167 & 0.156 & 0.169 & 0.188 & 0.178 & 0.144 & 0.186 & 0.175 \\ 0.151 & 0.139 & 0.125 & 0.136 & 0.157 & 0.150 & 0.123 & 0.158 & 0.139 \\ 0.159 & 0.146 & 0.132 & 0.138 & 0.160 & 0.149 & 0.127 & 0.159 & 0.151 \\ 0.193 & 0.179 & 0.162 & 0.173 & 0.184 & 0.181 & 0.150 & 0.192 & 0.186 \\ 0.186 & 0.170 & 0.164 & 0.166 & 0.190 & 0.174 & 0.139 & 0.191 & 0.174 \\ 0.198 & 0.189 & 0.162 & 0.180 & 0.195 & 0.186 & 0.146 & 0.196 & 0.191 \\ 0.172 & 0.167 & 0.151 & 0.156 & 0.176 & 0.173 & 0.139 & 0.168 & 0.164 \\ 0.170 & 0.158 & 0.149 & 0.153 & 0.171 & 0.167 & 0.136 & 0.175 & 0.169 \end{bmatrix} \end{array}. \quad (13)$$

According to Table 6, the $(r_i - c_i)$ value of the effort expectancy dimension $(r_i - c_i)$ has the highest positive value. Thus, the effort expectancy (D_2) is the most important dimension (D_2) which plays a dominant role in the causal network. This dimension has the most significant effect on other dimensions. Given this, the Phablet manufacturers and marketers should first take the effort expectancy (D_2) into consideration for enhancing consumers' adoption rates. The use intention dimension $(r_i - c_i)$ has the lowest $(r_i - c_i)$ value. Therefore, it is the least important dimension for improving the Phablet from the dimension of the causal network. Hedonic motivation $(r_i + c_i)$ has the largest value, and it can be interpreted that it has the most crucial influential relationships with all other dimensions. On the contrary, social influence has the lowest $(r_i + c_i)$ value, and it can be interpreted that it is less important than other dimensions. In light of the influential degrees versus each criterion, this finding implies that the social influence (D_3) can be recognized as the least influential dimension for predicting the Phablet adoptions.

According to the analytic results based on lead users' opinions, the Phablet manufacturers should emphasize on the degree of effort expectancy (D_2) and other dimensions than on the social influence (D_3). The causal networks of the total influence matrix based on dimensions and criteria are depicted in Figure 4, as this figure demonstrates that the perceived usefulness (c_{11}), complexity (c_{22}), social factors (c_{32}), perceived behavioral control (c_{41}), interest (c_{52}), quality (c_{61}), past behavior (c_{71}), service quality (c_{83}), and usage time (c_{91}) have the highest impacts on other criteria under each dimension, including performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, use intention, and use behavior, respectively. The causal relationship network being established can serve as a basis for Phablet manufacturers and marketers to reduce the performance gaps in each dimension. Furthermore, this causal relationship network model can be used for recognizing and finding appropriate alternatives strategies to approach the aspiration level.

The DNP approach is broadly employed to derive the influence weights versus each criterion belonging to the causal relation network. Based on the DNP method, the unweighted supermatrix **W**, which stands for the degree of importance of the interacted network, can be derived by

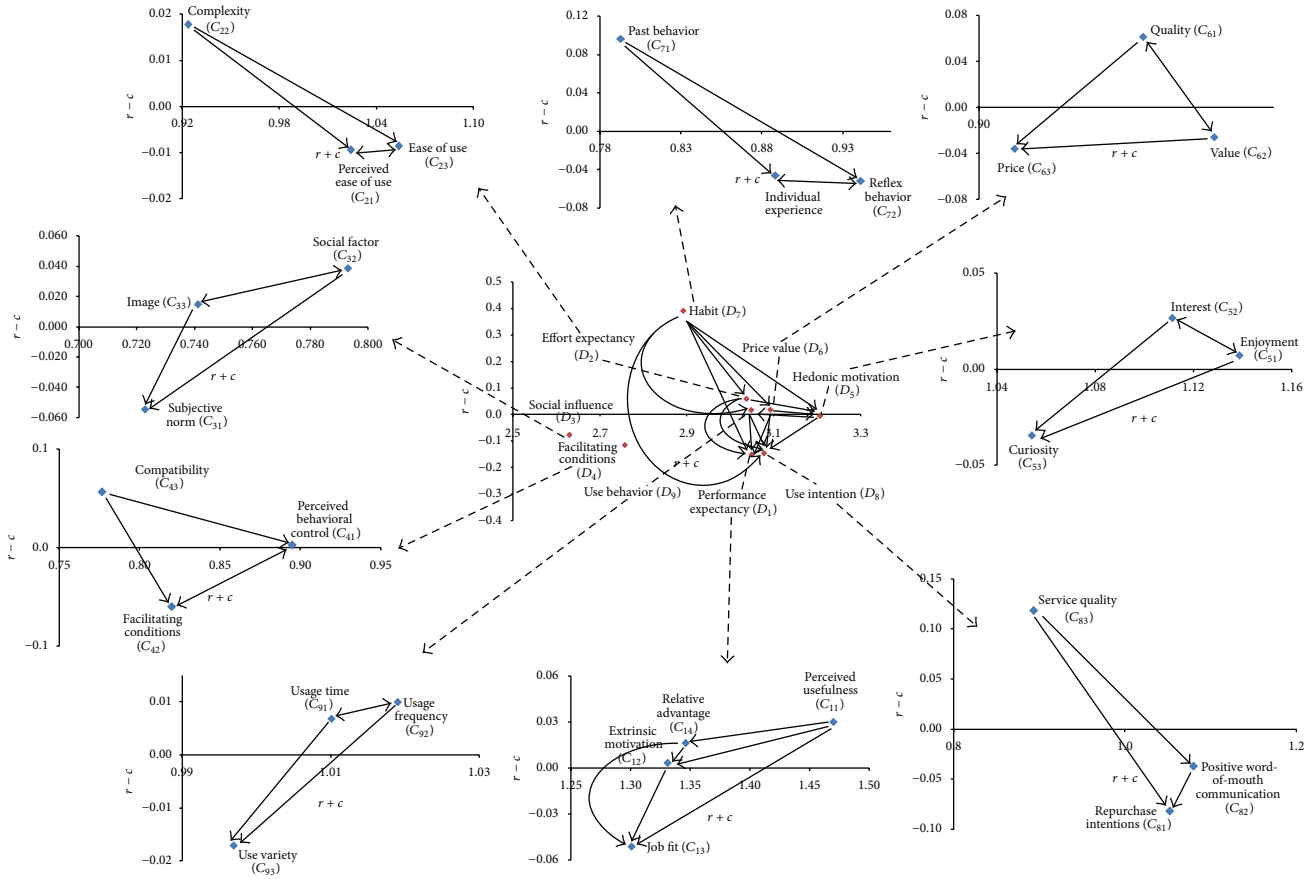


FIGURE 4: The causal relationship network versus each dimension and criterion.

(7). The results are demonstrated in (14). Given that the different dimensional weights can affect criteria belonging to each dimension, the weighted supermatrix can be derived based on (8). The results are demonstrated in (15). To converge the weighted supermatrix $\mathbf{W}^*$, the power of the weighted supermatrix $\mathbf{W}^*$ will be raised to infinity. Thus, the influence weights versus each criterion can be derived and demonstrated in Table 8.

The unweighted supermatrix $\mathbf{W}$:

$$\mathbf{W} = \begin{array}{c} \\ C_{11} \\ C_{12} \\ C_{13} \\ C_{14} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{31} \\ C_{32} \\ C_{33} \\ C_{41} \\ C_{42} \\ C_{43} \\ C_{51} \\ C_{52} \\ C_{53} \\ C_{61} \\ C_{62} \\ C_{63} \\ C_{71} \\ C_{72} \\ C_{73} \\ C_{81} \\ C_{82} \\ C_{83} \\ C_{91} \\ C_{92} \\ C_{93} \end{array} \begin{array}{c} \begin{array}{ccccccccccccccccccccccccccc} C_{11} & C_{12} & C_{13} & C_{14} & C_{21} & C_{22} & C_{23} & C_{31} & C_{32} & C_{33} & C_{41} & C_{42} & C_{43} & C_{51} & C_{52} & C_{53} & C_{61} & C_{62} & C_{63} & C_{71} & C_{72} & C_{73} & C_{81} & C_{82} & C_{83} & C_{91} & C_{92} & C_{93} \end{array} \\ \begin{bmatrix} 0.229 & 0.278 & 0.280 & 0.275 & 0.273 & 0.264 & 0.274 & 0.265 & 0.271 & 0.271 & 0.271 & 0.268 & 0.270 & 0.271 & 0.271 & 0.270 & 0.272 & 0.269 & 0.274 & 0.272 & 0.273 & 0.270 & 0.264 & 0.270 & 0.268 & 0.271 & 0.271 & 0.270 \\ 0.257 & 0.202 & 0.254 & 0.261 & 0.236 & 0.240 & 0.238 & 0.245 & 0.243 & 0.248 & 0.244 & 0.241 & 0.244 & 0.243 & 0.242 & 0.244 & 0.240 & 0.245 & 0.241 & 0.243 & 0.240 & 0.243 & 0.242 & 0.239 & 0.243 & 0.243 & 0.241 & 0.239 \\ 0.260 & 0.265 & 0.205 & 0.259 & 0.249 & 0.247 & 0.243 & 0.247 & 0.236 & 0.235 & 0.245 & 0.246 & 0.245 & 0.246 & 0.247 & 0.246 & 0.240 & 0.243 & 0.242 & 0.241 & 0.243 & 0.245 & 0.244 & 0.244 & 0.240 & 0.246 & 0.246 & 0.244 \\ 0.255 & 0.255 & 0.261 & 0.205 & 0.242 & 0.249 & 0.245 & 0.243 & 0.250 & 0.246 & 0.240 & 0.245 & 0.242 & 0.239 & 0.239 & 0.240 & 0.248 & 0.243 & 0.242 & 0.243 & 0.244 & 0.242 & 0.250 & 0.246 & 0.249 & 0.239 & 0.242 & 0.247 \\ 0.346 & 0.347 & 0.346 & 0.343 & 0.295 & 0.376 & 0.364 & 0.350 & 0.351 & 0.352 & 0.349 & 0.341 & 0.346 & 0.346 & 0.344 & 0.343 & 0.344 & 0.347 & 0.344 & 0.345 & 0.345 & 0.345 & 0.347 & 0.348 & 0.345 & 0.345 & 0.349 & 0.343 \\ 0.293 & 0.290 & 0.295 & 0.300 & 0.326 & 0.250 & 0.325 & 0.292 & 0.290 & 0.288 & 0.294 & 0.303 & 0.298 & 0.304 & 0.302 & 0.303 & 0.297 & 0.296 & 0.302 & 0.300 & 0.300 & 0.300 & 0.297 & 0.303 & 0.299 & 0.298 & 0.294 & 0.308 \\ 0.360 & 0.363 & 0.359 & 0.357 & 0.379 & 0.374 & 0.311 & 0.358 & 0.360 & 0.360 & 0.357 & 0.356 & 0.356 & 0.350 & 0.354 & 0.354 & 0.358 & 0.357 & 0.355 & 0.355 & 0.355 & 0.355 & 0.355 & 0.349 & 0.357 & 0.357 & 0.357 & 0.349 \\ 0.341 & 0.341 & 0.344 & 0.338 & 0.342 & 0.341 & 0.343 & 0.296 & 0.370 & 0.359 & 0.338 & 0.344 & 0.341 & 0.335 & 0.341 & 0.334 & 0.344 & 0.344 & 0.339 & 0.346 & 0.347 & 0.345 & 0.333 & 0.335 & 0.335 & 0.343 & 0.345 & 0.343 \\ 0.336 & 0.333 & 0.333 & 0.333 & 0.333 & 0.335 & 0.333 & 0.363 & 0.283 & 0.365 & 0.335 & 0.339 & 0.332 & 0.338 & 0.335 & 0.338 & 0.327 & 0.329 & 0.334 & 0.333 & 0.330 & 0.328 & 0.338 & 0.338 & 0.339 & 0.338 & 0.337 & 0.336 \\ 0.323 & 0.326 & 0.323 & 0.329 & 0.325 & 0.324 & 0.324 & 0.341 & 0.347 & 0.277 & 0.326 & 0.317 & 0.327 & 0.327 & 0.324 & 0.328 & 0.329 & 0.326 & 0.327 & 0.320 & 0.323 & 0.326 & 0.329 & 0.327 & 0.326 & 0.319 & 0.318 & 0.320 \\ 0.370 & 0.355 & 0.371 & 0.360 & 0.369 & 0.358 & 0.366 & 0.349 & 0.346 & 0.344 & 0.316 & 0.379 & 0.386 & 0.366 & 0.367 & 0.361 & 0.348 & 0.350 & 0.348 & 0.355 & 0.357 & 0.358 & 0.362 & 0.358 & 0.343 & 0.367 & 0.369 & 0.357 \\ 0.334 & 0.341 & 0.330 & 0.339 & 0.327 & 0.334 & 0.335 & 0.351 & 0.352 & 0.349 & 0.354 & 0.294 & 0.373 & 0.341 & 0.341 & 0.340 & 0.339 & 0.339 & 0.338 & 0.331 & 0.331 & 0.330 & 0.341 & 0.341 & 0.355 & 0.335 & 0.331 & 0.341 \\ 0.296 & 0.304 & 0.299 & 0.301 & 0.304 & 0.307 & 0.299 & 0.300 & 0.302 & 0.308 & 0.330 & 0.327 & 0.241 & 0.292 & 0.292 & 0.299 & 0.312 & 0.310 & 0.314 & 0.313 & 0.312 & 0.312 & 0.298 & 0.302 & 0.301 & 0.299 & 0.300 & 0.302 \\ 0.345 & 0.345 & 0.350 & 0.342 & 0.343 & 0.342 & 0.342 & 0.340 & 0.341 & 0.344 & 0.345 & 0.345 & 0.345 & 0.300 & 0.363 & 0.367 & 0.341 & 0.343 & 0.337 & 0.341 & 0.345 & 0.345 & 0.342 & 0.344 & 0.347 & 0.353 & 0.348 & 0.348 \\ 0.337 & 0.332 & 0.335 & 0.327 & 0.330 & 0.331 & 0.329 & 0.328 & 0.328 & 0.327 & 0.332 & 0.331 & 0.329 & 0.351 & 0.285 & 0.351 & 0.327 & 0.327 & 0.325 & 0.329 & 0.331 & 0.329 & 0.328 & 0.328 & 0.327 & 0.329 & 0.327 & 0.328 \\ 0.318 & 0.323 & 0.316 & 0.331 & 0.328 & 0.328 & 0.329 & 0.332 & 0.332 & 0.329 & 0.323 & 0.323 & 0.326 & 0.350 & 0.352 & 0.281 & 0.333 & 0.329 & 0.338 & 0.330 & 0.324 & 0.326 & 0.330 & 0.327 & 0.326 & 0.319 & 0.325 & 0.324 \\ 0.314 & 0.310 & 0.315 & 0.317 & 0.318 & 0.329 & 0.319 & 0.318 & 0.317 & 0.318 & 0.325 & 0.319 & 0.323 & 0.325 & 0.324 & 0.316 & 0.273 & 0.340 & 0.354 & 0.326 & 0.323 & 0.330 & 0.315 & 0.318 & 0.315 & 0.319 & 0.319 & 0.324 \\ 0.380 & 0.381 & 0.384 & 0.378 & 0.384 & 0.373 & 0.377 & 0.379 & 0.375 & 0.378 & 0.377 & 0.382 & 0.378 & 0.378 & 0.383 & 0.396 & 0.325 & 0.396 & 0.377 & 0.379 & 0.373 & 0.373 & 0.377 & 0.376 & 0.376 & 0.376 & 0.376 & 0.374 \\ 0.307 & 0.309 & 0.300 & 0.305 & 0.298 & 0.298 & 0.304 & 0.303 & 0.308 & 0.304 & 0.298 & 0.299 & 0.299 & 0.297 & 0.298 & 0.301 & 0.331 & 0.335 & 0.250 & 0.297 & 0.298 & 0.297 & 0.311 & 0.305 & 0.309 & 0.305 & 0.304 & 0.302 \\ 0.284 & 0.286 & 0.288 & 0.292 & 0.278 & 0.276 & 0.274 & 0.292 & 0.285 & 0.289 & 0.282 & 0.285 & 0.275 & 0.276 & 0.278 & 0.279 & 0.282 & 0.282 & 0.286 & 0.235 & 0.278 & 0.284 & 0.284 & 0.282 & 0.288 & 0.282 & 0.279 & 0.280 \\ 0.380 & 0.368 & 0.374 & 0.366 & 0.386 & 0.390 & 0.391 & 0.371 & 0.372 & 0.370 & 0.387 & 0.378 & 0.397 & 0.381 & 0.381 & 0.380 & 0.382 & 0.385 & 0.383 & 0.388 & 0.336 & 0.413 & 0.384 & 0.383 & 0.382 & 0.387 & 0.392 & 0.387 \\ 0.336 & 0.346 & 0.339 & 0.342 & 0.337 & 0.334 & 0.335 & 0.336 & 0.343 & 0.341 & 0.331 & 0.337 & 0.328 & 0.344 & 0.342 & 0.342 & 0.336 & 0.333 & 0.330 & 0.377 & 0.386 & 0.303 & 0.332 & 0.335 & 0.331 & 0.331 & 0.329 & 0.333 \\ 0.377 & 0.377 & 0.375 & 0.376 & 0.379 & 0.376 & 0.378 & 0.369 & 0.369 & 0.369 & 0.373 & 0.364 & 0.371 & 0.373 & 0.372 & 0.368 & 0.370 & 0.369 & 0.367 & 0.380 & 0.378 & 0.383 & 0.327 & 0.403 & 0.392 & 0.376 & 0.374 & 0.375 \\ 0.372 & 0.374 & 0.371 & 0.363 & 0.373 & 0.376 & 0.372 & 0.365 & 0.365 & 0.365 & 0.369 & 0.365 & 0.365 & 0.367 & 0.368 & 0.368 & 0.367 & 0.367 & 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\end{array} \quad (14)$$

The weighted supermatrix $\mathbf{W}^*$:

$$\mathbf{W}^* = \begin{array}{c} \\ C_{11} \\ C_{12} \\ C_{13} \\ C_{14} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{31} \\ C_{32} \\ C_{33} \\ C_{41} \\ C_{42} \\ C_{43} \\ C_{51} \\ C_{52} \\ C_{53} \\ C_{61} \\ C_{62} \\ C_{63} \\ C_{71} \\ C_{72} \\ C_{73} \\ C_{81} \\ C_{82} \\ C_{83} \\ C_{91} \\ C_{92} \\ C_{93} \end{array} \begin{array}{c} \begin{array}{ccccccccccccccccccccccccccc} C_{11} & C_{12} & C_{13} & C_{14} & C_{21} & C_{22} & C_{23} & C_{31} & C_{32} & C_{33} & C_{41} & C_{42} & C_{43} & C_{51} & C_{52} & C_{53} & C_{61} & C_{62} & C_{63} & C_{71} & C_{72} & C_{73} & C_{81} & C_{82} & C_{83} & C_{91} & C_{92} & C_{93} \end{array} \\ \begin{bmatrix} 0.027 & 0.033 & 0.033 & 0.032 & 0.033 & 0.032 & 0.033 & 0.031 & 0.032 & 0.032 & 0.033 & 0.032 & 0.032 & 0.033 & 0.033 & 0.033 & 0.032 & 0.032 & 0.033 & 0.033 & 0.033 & 0.032 & 0.031 & 0.032 & 0.032 & 0.033 & 0.033 & 0.033 \\ 0.030 & 0.024 & 0.030 & 0.031 & 0.028 & 0.029 & 0.029 & 0.029 & 0.029 & 0.029 & 0.029 & 0.029 & 0.029 & 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\end{array} \quad (15)$$

From the perspective of DNP, the influence weights including local weights and global weights can be derived. The global weight stands for the real influence weighs being derived from the local weight. The global weight can be regarded as a priority indicator for ranking these dimensions and criteria. The importance versus these dimensions and criteria can thus be evaluated and ranked. In this research, the purpose of the DNP is to derive the dominant factors influencing consumers' acceptances of Phablets. The future Phablet products can also be enhanced in accordance with the causal relationship network being demonstrated in Figure 4.

In general, the findings demonstrate that both hedonic motivation (D_5) and use behavior (D_9) are the most important dimensions in light of influence relationship. Furthermore, the criteria of repurchase intention (c_{81}) and reflex behavior (c_{72}) are the first considerations based on the global weights being derived. In contrast, extrinsic motivation (c_{12}) and relative advantage are the least important (c_{14}) criteria for influencing the Phablet acceptance. Besides, both positive word-of-mouth communications and the value are the most significant criteria. The reasons are that consumer often considers product value and whether the product is with good reputation or not when purchasing smart mobile products. In conclusion, DNP is an effective approach that can be employed for the influence weight derivations in terms of the causal network among the factors.

5. Discussion

This study attempts to derive factors influencing consumer behaviors and thus the adoptions of Phablets. In this section, both managerial implications and advances in research methods will be discussed.

5.1. Managerial Implications. In this study, lead users mean experts with more than 5-year experiences in smart mobile devices company; DEMATEL method was used based on lead users' opinions to construct the analytical framework. The results were integrated and shown in Figure 5 which demonstrates the differences between the original UTAUT2 based theoretical framework versus the viewpoints being derived from lead users.

From the lead users' perspective, the causal relationships are very complicated. The causal relations revealed that these complicated paths are being established in terms of those experts (such as managers and senior engineers of the Phablet manufacturers), whose opinions and innovative thinking are often generated ahead of mass users' thoughts. The lead users expect to develop and introduce new ways to users. In other words, generating new customers' value proposition is their purpose. Thus, Phablet manufacturers and marketers should focus on the marketing and product development as well as negotiating effectively with engineers so that these paths being generated based on lead users' opinions can be realized for the future products to be promoted to mass users. According to Figure 5, influence paths exist in structural map based on the opinions of the lead users. Such paths include the effort expectancy-use intention, price value-use intention, habit-use intention, and use intention-use behavior. We also find that the habit has influence on price value and performance expectancy and effort expectancy in light of lead users' opinions. Further, the effort expectancy has influences on both the performance expectancy and hedonic motivation.

On the other hand, from the lead users' perspective, the causal relationship network of each dimension can further

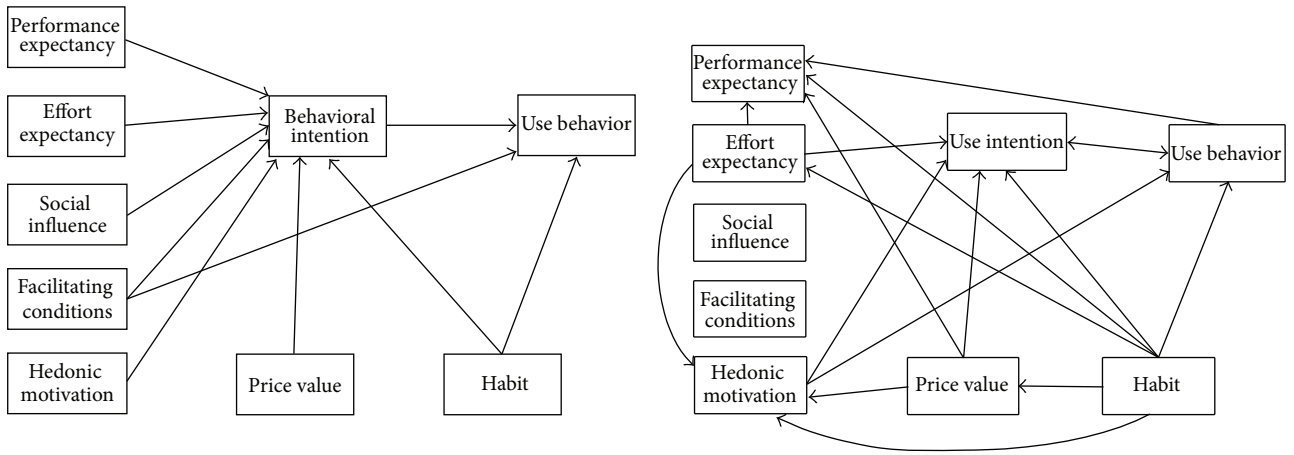

Figure 5: The original model versus the construct being derived by DEMATEL.

Table 7: $r_i + c_i$ and $r_i - c_i$ versus each criterion.

Criteria	r_i	c_i	$r_i + c_i$	$r_i - c_i$
Perceived usefulness (c_{11})	5.016	5.356	10.373	−0.340
Extrinsic motivation (c_{12})	4.398	4.812	9.210	−0.415
Job fit (c_{13})	4.128	4.858	8.985	−0.730
Relative advantage (c_{14})	4.529	4.847	9.376	−0.318
Perceived ease of use (c_{21})	4.883	4.795	9.678	0.088
Complexity (c_{22})	4.447	4.140	8.587	0.308
Ease of use (c_{23})	5.161	4.934	10.095	0.227
Subjective norm (c_{31})	3.595	4.309	7.904	−0.714
Social factor (c_{32})	4.358	4.220	8.578	0.137
Image (c_{33})	3.992	4.093	8.085	−0.102
Perceived behavioral control (c_{41})	4.608	4.797	9.405	−0.189
Facilitating conditions (c_{42})	4.015	4.530	8.545	−0.515
Compatibility (c_{43})	3.748	4.053	7.801	−0.305
Enjoyment (c_{51})	5.227	5.143	10.370	0.083
Interest (c_{52})	5.156	4.922	10.078	0.234
Curiosity (c_{53})	4.603	4.891	9.494	−0.289
Quality (c_{61})	5.264	4.584	9.848	0.680
Value (c_{62})	5.248	5.402	10.651	−0.154
Price (c_{63})	4.043	4.341	8.384	−0.298
Past behavior (c_{71})	5.019	3.267	8.286	1.753
Reflex behavior (c_{72})	5.262	4.443	9.705	0.819
Individual experience (c_{73})	5.088	3.943	9.031	1.145
Repurchase intentions (c_{81})	4.423	5.615	10.038	−1.192
Positive word-of-mouth communication (c_{82})	4.790	5.542	10.332	−0.752
Service quality (c_{83})	4.499	3.867	8.366	0.632
Usage time (c_{91})	4.792	4.687	9.480	0.105
Usage frequency (c_{92})	4.818	4.758	9.576	0.061
Use variety (c_{93})	4.738	4.696	9.434	0.042

Table 8: The influence weights versus each dimension and criterion.

Dimensions	Local weights	Rank	Criteria	Local weights	Rank	Global weights
D_1	0.1194	3	C_{11}	0.2696	1	0.0322
			C_{12}	0.2421	4	0.0289
			C_{13}	0.2443	2	0.0292
			C_{14}	0.2440	3	0.0291
D_2	0.1110	6	C_{21}	0.3457	2	0.0384
			C_{22}	0.2987	3	0.0332
			C_{23}	0.3556	1	0.0395
D_3	0.1011	8	C_{31}	0.3408	1	0.0345
			C_{32}	0.3348	2	0.0338
			C_{33}	0.3244	3	0.0328
D_4	0.1071	7	C_{41}	0.3584	1	0.0384
			C_{42}	0.3387	2	0.0363
			C_{43}	0.3028	3	0.0324
D_5	0.1199	2	C_{51}	0.3439	1	0.0412
			C_{52}	0.3291	2	0.0395
			C_{53}	0.3270	3	0.0392
D_6	0.1148	4	C_{61}	0.3202	2	0.0368
			C_{62}	0.3769	1	0.0433
			C_{63}	0.3030	3	0.0348
D_7	0.0935	9	C_{71}	0.2809	3	0.0263
			C_{72}	0.3814	1	0.0357
			C_{73}	0.3377	2	0.0316
D_8	0.1203	1	C_{81}	0.3730	1	0.0449
			C_{82}	0.3686	2	0.0443
			C_{83}	0.2584	3	0.0311
D_9	0.1130	5	C_{91}	0.3316	3	0.0375
			C_{92}	0.3363	1	0.0380
			C_{93}	0.3322	2	0.0375

be discussed. In the performance expectancy dimension, as illustrated in Figure 6, perceived usefulness (c_{11}) has direct influences on extrinsic motivation (c_{12}), job fit (c_{13}), and relative advantage (c_{14}), while the relative advantage (c_{14}) has an indirect impact on job fit (c_{13}) through extrinsic motivation (c_{12}). In practice, managers may focus on improvement in the perceived usefulness dimension. If managers wanted to obtain high performance in terms of extrinsic motivation (c_{12}) and job fit (c_{13}), the Phablet manufacturers would get an improved priority for the c_{11} and c_{14} beforehand. Then these two criteria can effectively enhance Phablet products to attract users' attentions.

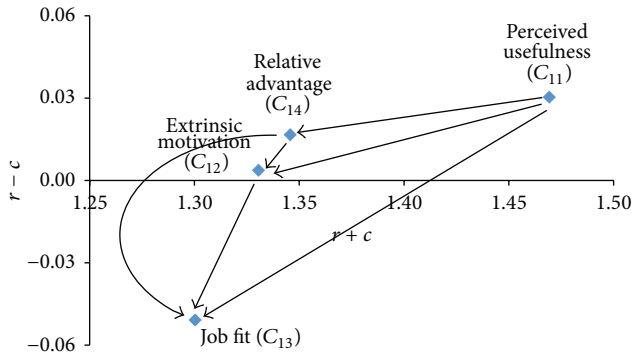

Figure 6: The causal relationship network for performance expectancy.

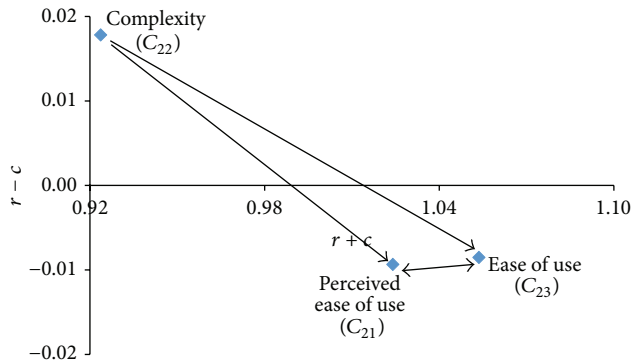

Figure 7: The causal relationship network for effort expectancy.

In the effort expectancy dimension, the c_{23} is influenced by both the c_{22} and c_{21}. In order to enhance the effort expectancy, managers and engineers may first improve the complexity of the Phablet products in comparison to other brands of Phablet devices. The causal relationship is demonstrated in Figure 7.

In the social influence dimension, the c_{32} can enhance the social influence. If managers wanted to enhance the social influence (c_{32}), appropriate promotion and branding strategies should be adopted. The causal relationship network is shown in Figure 8. The illustration depicts that the social factor (c_{32}) and the image (c_{33}) should be improved beforehand, and then the c_{31} would be enhanced.

In the facilitating conditions dimension, compatibility (c_{43}) is the most influential criterion, which can influence c_{42} and c_{41} directly (Figure 9). This implies that c_{43} has an improved priority comparing c_{42} and c_{41}. By improving c_{43}, the performance of facilitating conditions can be enhanced.

For the hedonic motivation dimension, the interest (c_{52}) has direct impacts on enjoyment (c_{51}) and curiosity (c_{53}). At the same time, the Enjoyment (c_{51}) influences interest (c_{52}) and curiosity (c_{53}) directly. Based on the causal relationships (as shown in Figure 10), the interest (c_{52}) should be first improved; then the hedonic motivation can be enhanced.

For the price value dimension being demonstrated in Figure 11, the quality has the highest ($r_i - c_i$) value, which means that quality (c_{61}) has the important impact on value

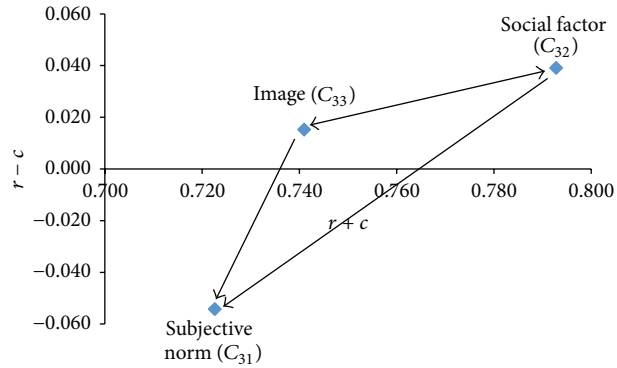

Figure 8: The casual relationship network for social influence.

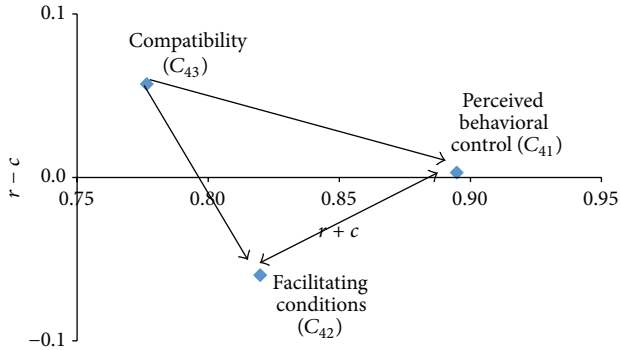

Figure 9: The causal relationship network for facilitating conditions.

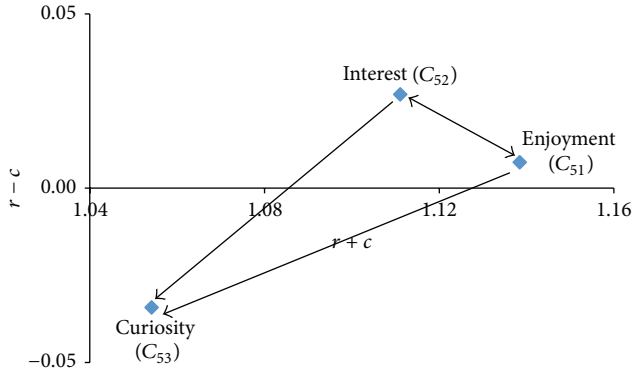

Figure 10: The causal relationship network for hedonic motivation.

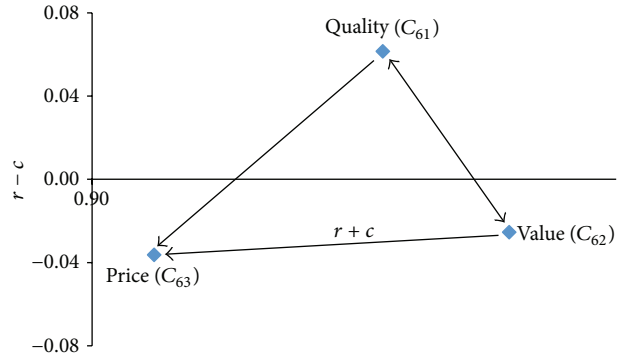

Figure 11: The causal relationship network for price value.

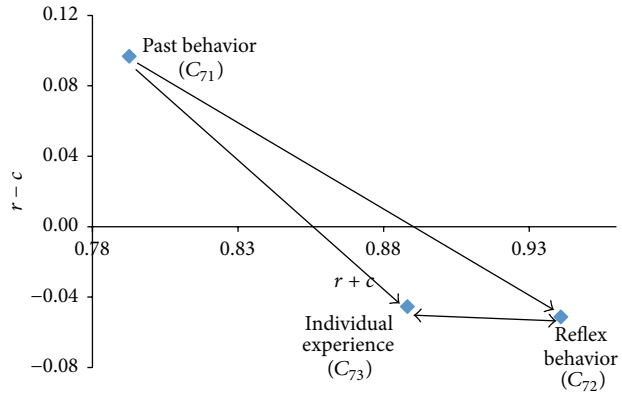

Figure 12: The causal relationship network for habit.

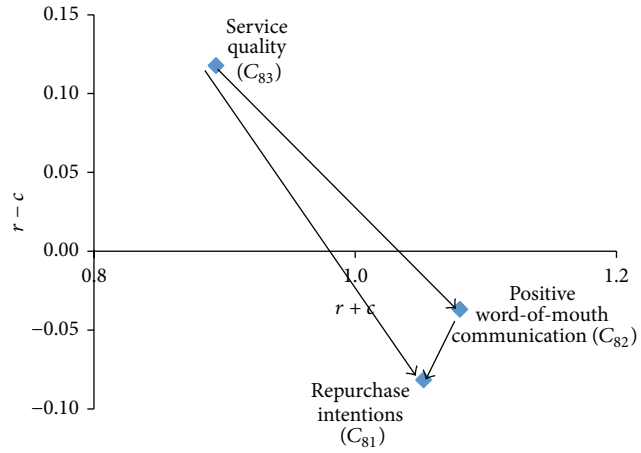

Figure 13: The causal relationship network for use intention.

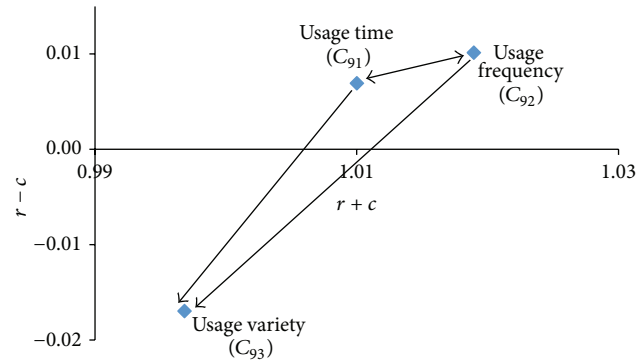

Figure 14: The casual relationship network for use behavior.

(c_{62}) and price (c_{63}). These results further imply that Phablet manufacturers should improve the quality (c_{61}) of future Phablet products for satisfying future users' needs. Then, the hedonic motivation can be enhanced accordingly.

Similarly, in the habit dimension, c_{71} should be prioritized in improvement, and the habit for Phablet use can be enhanced. The causal structure is shown in Figure 12.

Moreover, in order to improve the use intention dimension in Phablet adoptions, the service quality of companies (c_{83}) should be first improved since the criterion would have direct influences on positive word-of-mouse communications and repurchase intensions. The results are demonstrated in Figure 13.

The causal network of the use behavior dimension, as illustrated in Figure 14, indicates that the usage frequency (c_{92}) influences directly usage variety (c_{93}) and usage time (c_{91}). Likewise, the usage time (c_{91}) also influences directly the usage time (c_{92}) and the usage variety (c_{93}). This result implies that the enhancement of the usage frequency of Phablets will be a vital task for enhancing the adoptions of the future Phablets. Thus, the usage frequency can be recognized as the most important criterion for enhancing the use behavior dimension.

In summary of Section 5.1, the influence weights versus the criteria and dimensions can be derived by the DNP technique based on lead users' opinions. Based on the weights being associated with each dimension, the ranking of dimensions is shown as follows (from high to low): use intention, hedonic motivation, performance expectancy, price value, use behavior, effort expectancy, facilitating conditions, social influence, and habit. These results imply that the use intention, hedonic motivation, and price value are the most particularly crucial factors for Phablet adoption. More specifically, from the use intention dimension, the repurchase intentions and the positive word-of-mouth play essential roles in the acceptance of future Phablets. These results are consistent with the work by Kotler and Keller [101] and that of Keller et al. [98]. In price value dimension, Phablet quality, value, and price are recognized as crucial indicators for determining whether a consumer will adopt the Phablet. The findings were also consistent with prior academic works on consumer behaviors and new product development strategies. Thus, practitioners and managers should focus on these regards for improving marketing means and enhancing the future Phablets. For example, the China based Xiaomi Company designed smart phones with low price and high quality and performance and adopted hunger marketing strategies to commercialize their smart phones. So far, the marketing strategies have yielded huge profits and good word-of-mouth effect for them.

5.2. Advances in Research Methods. From the aspect of advances in research methods, this research introduced the DNP based on the original UTAUT2 theoretical model. In contrast to the structure equation modeling (SEM) based methods, for example, the confirmatory factor analysis (CFA), which allows researchers to test the hypothesis for the relationships between the observed variables and their underlying latent construct(s) exists, the DNP based approach, which can be used to derive the causal relationship without any assumptions on the existing relationships between variables, is apparently more suitable due to the following two reasons. (1) The available number of respondents is very limited, especially when the number of respondents is a very small number, for example, 5 to 10. (2) The research questions may not be measured as is. Following are detailed discussions from the two aspects.

First, from the aspect of expert availability, for some specific research questions like the definition of disruptive

or radical innovative products, the definition of innovation policy tools for some emerging technology or service (e.g., the first author's earlier work [83] on the reconfiguration of the silicon intellectual property mall), the availability of respondents is very limited. Therefore, the traditional statistical analysis based approaches are not applicable due to the violation of the central limit theorem, in which statistical analysis approaches require a minimum sample size of 30 so that the results can be statistically significant [102]. For such problems, decision making frameworks being constructed based on the opinions of 6 to 10 experts will be much more reasonable and feasible, since the total number of experts being available is very limited.

Second, from the dimension that the research questions may not be measured as is, numerous academic works support this viewpoint. According to Suhr [103], for most of the cases, the researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori, and then tests the hypothesis statistically [103]. However, it is becoming harder to find research articles that present only a simple confirmatory factor analysis on a set of variables [104]. MacCallum and Austin [105] argued that a structural equation model is a hypothesis about the structure of relationships among measured variables in a specific population. Researchers should explicitly define the population of interest, although this is often not done in practice, and should acknowledge that the generalizability of a model beyond that population may be uncertain [105]. Therefore, some research questions may not be measured as the theoretic framework, for example, the UTAUT2 based framework in this research, being adopted.

Based on the above discussion, we argue that the DEMATEL based network process is more applicable in deriving the causal relationship based on lead users' opinions. A new analytic framework based on the population of interest, here the group of lead users, can be constructed without the predefined path framework.

In the future, the proposed analytic framework can be applied to the adoptions of any disruptive or radical innovative information technology products or services, in which the features and performance of such products or services are very hard for consumers' understanding. Therefore, the analytic framework is especially useful for the information technology hardware and software industries. Possible applications include the next generation smart eyeglasses, smart watches, infrastructure as a service (IaaS), software as a service (SaaS), and platform as a service (PaaS). Usually, normal consumers cannot figure out the technical details as well as possible applications. Further, the proposed DNP based analytic framework can also serve as a tool for improving the information technology products or services from the criteria which are the most influential from the dimension based on the analytic results being derived by the DEMATEL.

6. Conclusions

This research aims to derive the crucial factors for exploring users' acceptance of future Phablet based on the opinions being provided by lead users. To fulfill the abovementioned purposes, this research thereby proposes an evaluation model for deriving the factors influencing Phablet acceptances. The future Phablets can be improved accordingly. Based on the empirical study results, the importance of understanding the relationships between criteria among each dimension has been emphasized. Based on the influence weights being derived, the factors with higher priority should be improved. Finally, the proposed analytical framework can be utilized for enhancing future Phablet devices or other related smart mobile devices. The analytic results can also serve as a basis for marketing, R&D, and manufacturing strategy formulations in the future.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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