Abstract — Mobile value-added services have drawn the attention of researchers and practitioners recently, due to the rapid development of the mobile telecommunications market. Various mobile-based services and applications have therefore been introduced in order to satisfy mobile phone subscribers’ needs. Facing intensive competition, service providers are eager to persuade mobile phone subscribers into using the mobile value-add services in the hope to expand market share and ultimately raise revenues. This study therefore intends to investigate the factors that influence mobile phone subscribers’ intention to use mobile value-added services in Iran by incorporating quality factors and perceived playfulness with the Technology Acceptance Model. The proposed model has been applied as an empirical case for Iranian value added services and the results are analyzed.

Keywords— Mobile value-added services; Service quality; Perceived value; Customer satisfaction; Post-Purchase intention

I. INTRODUCTION

The worldwide mobile Value added services market recorded another quarter of year-over-year decline in the second quarter of 2009 (2Q09) and current trends in Iran show a similar situation.

Unofficial sources say that over 1 million mobile phones are sold in Iran every month and this number belongs to just people who know the value added services of mobile.

Worldwide trends encourage mobile operators and manufacturers to invest on smartphones with multimedia messaging, high-speed Internet services, and Internet-related applications. Mobile phones are tightly integrated with Skype, Flickr, Twitter, and YouTube applications, while I see different trends in the Iran market. There are many factors that differentiate Iran from other countries.

Laws and policies for importers, limited GPRS-based Internet services by mobile operators, lack of multimedia messaging and 3G mobile services, and differences in sales and distribution channels. All of these factors make Iran a special market with different behaviors.

The demand for mobile phones has considerably increased over the past 10 years in Iran as well as in other countries. Mobile phone and its application for Iranian now is a necessity, so every day the competition between mobile phone suppliers gets fiercer. Content providers market shares vary heavily from month to month. Nevertheless little formal empirical analysis has been accomplished on value added services in Iran. This research goal is to fill this gap and provide a formal statistical analysis of different value added service features and its relation to customer behavior.

Mobile value added services market analysis shows that Iranians are mostly attracted to contents with good quality and customized than general contents.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Current value-added service researches merely focus on a single category of value-added services such as mobile payment (e.g. [2] and [3]). Other approaches chiefly deal with business model elements in electronic commerce (e.g. [4] and [5]) and do not concentrate on mobile value-added services. As an excellent instance in the category, Wirtz introduced fundamental limited models including the market, procurement, service compiling, offering, distribution, and capital model [6]. In [7] Osterwalder presented a detailed survey on generic business model ontology. Finally, the most analogous approach was offered by Poustchi et al. who derived six models including market model, value proposition model, implementation model, capital model, distribution and communication model, and threat model [2]. However, these researches do not address the pivotal requirement of
MNO’s (or service aggregators/providers) which is a multi-step process of launching a value-added service and offering its services to the subscriber market.

A. Service quality

Parasuraman, Zeithaml, and Berry (1985, 1988) conceived that service quality is the difference between customers’ expectation and their perceived performance of a service. Based on this concept, Parasuraman et al. (1988) developed the SERVQUAL model (including five dimensions, namely tangible, responsiveness, reliability, assurance, and empathy) to measure service quality. This model has drawn attention from the academic and the practical circles. However, many scholars have questioned about the conceptual framework and measurement method of this model. For instance, Cronin and Taylor (1992) pointed out that using service quality performance (SERVPERF, i.e. the perceived service in SERVQUAL) to measure service quality produces better results of reliability, validity, and predictive power than using SERVQUAL. Some other studies (Boulding, Kalra, Richard, & Zeithaml, 1993; McAlexander, Kaldenberg, & Koenig, 1994; Parasuraman, Zeithaml, & Berry, 1994; Zeithaml, Berry, & Parasuraman, 1996) also maintained that SERVPERF is more accurate than SERVQUAL in the measurement of service quality, and SERVQUAL can provide better diagnostic information. In the studies of the information industry, similar findings have been proposed (Landrum & Prybutok, 2004; Pitt, Watson, & Kavan, 1997; Van Dyke, Kappelman, & Prybutok, 1997), and Zeithaml, Parasuraman, and Malhotra (2002) proposed that it is not necessary to use customers’ expectation to measure the service quality of a website. Therefore, this study will directly use perceived service quality to measure the service quality of mobile value added services.

Based on the aforementioned studies of website and telecom service quality, this study further categorizes service quality factors into four dimensions, including content quality, navigation and visual design, management and customer service, and system reliability and connection quality.

B. Perceived value

Customer’s perceived value can be defined from the perspectives of money, quality, benefit, and social psychology. The Monetary perspective indicates that value is generated when less is paid (such as by using coupons or promotions) for goods (Bishop, 1984).

In other words, it is the concept of consumer surplus in economics; perceived value is the difference between the highest price that consumers are willing to pay for a product or a service and the amount practically paid. According to the quality perspective, value is the difference between the money paid for a certain product and the quality of the product (Bishop, 1984). That is, when less money is paid for a high quality product, positive perceived value will be created. The benefit perspective indicates that perceived value is customers’ overall evaluation of the utility of perceived benefits and perceived sacrifices (Zeithaml, 1988). That is, goods carrying particular meanings (such as social economic status and social culture) can increase the effect of social self-concept (Sweeney & Soutar, 2001; Wang et al., 2004). In this study, perceived value is the evaluation of the benefits of a product or a service by customers based on their advance sacrifices and ex post perceived performance when they use mobile value-added services.

In the research of the relationships between service quality and customer’s perceived value in conventional retailing and online shopping, most of the empirical studies have pointed out that service quality will positively influence perceived value (Bauer et al., 2006; Brady, Robertson, & Cronin, 2001; Cronin et al., 1997, 2000). Among the studies of the telecom industry, Wang et al. (2004) and Turel and Serenko (2006), respectively, investigated the mobile services in China and Canada and found out that service quality is positively related to perceived value.

C. Customer satisfaction

Customer satisfaction can be defined using the transaction-specific perspective or cumulative perspective. The transaction-specific perspective indicates that customer satisfaction is the evaluation based on the recent purchase experiences (Boulding et al., 1993). Compared with the transaction-specific perspective, the cumulative perspective stresses overall evaluations, indicating that evaluations of customer satisfaction should be based on all the purchase experiences of the customer, disregarding any specific purchase experience (Johnson & Fornell, 1991). Parasuraman et al. (1988) argued that the cumulative perspective is more capable of evaluating the service performance of firms and more effective in predicting consumers’ post-purchase behaviors (Wang et al., 2004). Among the studies of customer satisfaction in the information industry, Lin and Wang (2006) revealed that customer satisfaction of mobile commerce is consumer’s total response to the purchase experiences in a mobile commerce environment. Therefore, in this study, customer satisfaction is defined as the total consumption perception of consumers when using mobile value added services.

Previous studies of conventional retailing have pointed out that service quality positively influences customer satisfaction (Cronin et al., 2000; Johnson & Fornell, 1991; Kristensen, Martensen, & Gronholdt, 1999). Similar conclusions have been proposed in the studies of website and online shopping (Bauer et al., 2006; Collier & Bienstock, 2006; Hsu, 2006; Kuo, 2003; Lee & Lin, 2005; Park & Kim, 2006). Among the studies of the telecom industry, Wang et al. (2004) investigated the telecom industry in China, and Kim et al. (2004), Tung (2004), and Turel and Serenko (2006) investigated the mobile services in South Korea, Singapore, and Canada, respectively. These studies also supported that service quality positively influences customer satisfaction.

In the research of the relationships between perceived value and customer satisfaction, empirical studies of the conventional retailers discovered that perceived value positively influences customer satisfaction in most cases (Cronin et al., 2000; Eggert & Ulaga, 2002). A similar conclusion was also proposed in the studies of online shopping websites and e-commerce (Hsu, 2006; Yang & Peterson, 2004). In the aspect of the telecom industry, Wang et al. (2004) (focusing the telecom industry in China), Tung (2004) (SMS service in Singapore), Lin and Wang (2006) (mobile commerce in Iran), and Turel and Serenko (2006) (mobile services in Canada) all revealed
that perceived value is positively related to customer satisfaction.

D. Post-purchase intention

Post-purchase intention is the tendency that consumers will purchase the goods or services at the same shop and deliver their use experiences to friends and relatives (Cronin et al., 2000; Wang et al., 2004; Zeithaml et al., 1996). To evaluate post-purchase intention, Zeithaml et al. (1996) adopted loyalty, switch, pay more, external response, and internal response to assess the evaluation work. Boulding et al. (1993) used repurchase intention and word of mouth (WoM) to evaluate consumer’s post-purchase intention. Repurchase intention is the process of an individual purchasing goods or services from the same firm (Hellier, Geursen, Carr, & Rickard, 2003), and the reason for repurchase is primarily based on past purchase experiences. Compared with attracting new customers, enterprises can spend less on marketing to retain old customers (Zeithaml et al., 1996). WoM is a process in which consumers who have used a certain product or service pass their experiences through word of mouth to consumers planning to purchase the product or service (Westbrook, 1987). Consumers who have not experienced or fully understood the properties of a certain product or service may usually rely on WoM to acquire information (Bansal & Voyer, 2000). Therefore, compared with external marketing strategies, WoM is more important and influential to customer’s attitude and behavior (Harrison-Walker, 2001).

In previous studies, post-purchase intention has been frequently used to inspect service quality (Alexandris, Dimitriadis, & Markata, 2002; Boulding et al., 1993; Cronin & Taylor, 1992; Cronin et al., 1997, 2000; Wang et al., 2004; Zeithaml et al., 1996), which has been considered as significantly and positively influential to post-purchase intention (Alexandris et al., 2002; Boulding et al., 1993; Cronin et al., 1997, 2000; Zeithaml et al., 1996). In other words, good service quality can induce positive post-purchase intention of consumers. In the research of website and online stores, Kuo (2003) pointed out that the service quality of online community is positively related to continuous use, referral, and loyalty. Lee and Lin (2005) found that the service quality of online shops positively influences post-purchase intention.

In recent years, corporate managers and marketing staffs have used long-neglected perceived value to evaluate consumer’s post-purchase intention (Eggert & Ulaga, 2002; Lin, Sher, & Shih, 2005; Patterson & Spreng, 1997; Petrick, 2002; Wang et al., 2004). In the discussion of the relationships between perceived value and post-purchase intention, many scholars considered perceived value has direct effects on repurchase intention and WoM (Eggert & Ulaga, 2002; Lin et al., 2005; Petrick, 2002; Wang et al., 2004). Cronin et al. (2000) discovered in a cross-industrial research that perceived value has positive effects on post-purchase intention. Wang et al. (2004) which focused on the telecom industry in China also supported that perceived value positively influences post-purchase intention. Lin and Wang (2006) also revealed that perceived value positively influences loyalty in the research of mobile commerce in Iran.

Many studies of satisfaction have pointed out a positive relationship between customer satisfaction and post-purchase intention (Brady et al., 2001; Cronin et al., 2000; Johnson & Fornell, 1991). Consumers with a higher level of satisfaction tend to have a stronger intention to repurchase and recommend the purchased product (Zeithaml et al., 1996). In other words, when customer satisfaction is enhanced, repurchase can be more frequent. The extant studies of e-retailing and online shopping also provided the similar conclusions (Collier & Bienstock, 2006; Lee & Lin, 2005). Among the studies of the telecom industry, Gerpott, Rams, and Schindler (2001) and Tung (2004), respectively, examined the telecom industry in Germany and SMS service in Singapore. They also concluded that customer satisfaction is positively related to post-purchase intention. Moreover, other studies of the mobile services in Canada and China also supported this argument (Turel & Serenko, 2006; Wang et al., 2004). Lin and Wang (2006) manifested a positive relationship between customer satisfaction and customer loyalty in the study of mobile commerce in Iran.

E. The hypotheses

The hypotheses to be examined are as follows.

H1: Service quality positively influences perceived value in mobile value-added services.

H2: Service quality positively influences customer satisfaction in mobile value-added services.

H3: Perceived value positively influences customer satisfaction in mobile value-added services.

H4: Service quality positively influences post-purchase intention in mobile value-added services.

H5: Perceived value positively influences post-purchase intention in mobile value-added services.

H6: Customer satisfaction positively influences post-purchase intention in mobile value-added services.

III. RESEARCH METHODOLOGY

A. Questionnaire Design

The questionnaire used in this study was designed according to related literatures and users’ and experts’ opinions. After the draft was completed, a pretest was performed on experts and users familiar with mobile
value-added services to modify items with ambiguous expressions. Therefore, questionnaire respondents could understand the questions in the formal survey and the content validity of the questionnaire could be ensured. The questionnaire was composed of two sections. The first section was intended to understand each respondent’s basic personal data and usage of mobile phone and value-added services. All the measurement scales adopted were nominal. The second section measured the respondent’s perception of each construct in the research model. All items were assessed using five-point Likert scales from 1 = "strongly disagree" to 5 = "strongly agree". Table 1 shows the research constructs and items included in the questionnaire. Operationalizations of the research constructs are as follows.

B. Research subjects and sampling method

This study was conducted in Iran because the high penetration rate in mobile phone (117.72%) technologies and applications (DGT, 2012).

Under limited research resources, 15 shop center in Tehran were selected, and unsubscribes and subscribes person in these research were the respondents of this study. In the formal survey, we requested shop center managers willing to assist our research to let us distribute questionnaires in shop center and retrieve them after persons have collectively completed their answers. Before the formal survey, the purpose of this study and notices were explained. Assistance was further provided to the respondents during the survey to reduce the occurrence of invalid response. A total of 1500 questionnaires were distributed, and the response rate was 100%. Excluding the respondents not in the selected age group (age 15–45) and those who have never used mobile value-added services, a total of 387 valid questionnaires were obtained.

IV. DATA ANALYSIS AND DISCUSSION

A. Sample characteristics

Among the samples collected, female respondents (58.4%) were the majority. In terms of education background, undergraduate students accounted for 59.1%. Most of them were the subscribers of Irancell Telecom (54.5%). In terms of use time, over 90% (91.5%) of them used value-added services for less than 30 min a month, and nearly 60% (58.4%) of them used no more than 10 min a month. Most of them (81.4%) spent no more than 20000 Rials on value-added services a month. In terms of value-added services used, the top five value-added services were ringtone (48.6%), multimedia message service (MMS) (48.4%), picture download (28.4%), music download (28.2%), and auto answering message (13.2%). Over the past 6 months, MMS was the most frequently used service (33.3%). Among the reasons why consumers did not use mobile value-added services, need-irrelevant (48.0%) was the main cause, followed by lack of understanding about how to use them (40.7%) and high cost (33.0%). (The above three questions allowed multiple answers.) In order to assess the representativeness of the sample, we collected and compared socio-demographical characteristics and the most popular mobile value-added services of the respondents with those reported in a survey of mobile data services use in Iran, one of the leading organizations for providing abundant and professional information on Internet demographics and trends. Our comparison revealed a close match between both samples.

B. Verification of the proposed model and hypotheses

This study employed structural equation modeling (SEM) to verify the proposed model and hypotheses and used LISREL 8.52 as the analysis tool. The dimensions of service quality were analyzed first. Later, the research model was analyzed and verified. For parameter estimation, maximum likelihood method was adopted. In the model fitness test, measurement model test and structural model test were used.

V. DATA ANALYSIS

A. Customer Satisfaction & Post-Purchase Intention

According to the results of statistical analysis concluded sig = 0.000 < 0.05, thus this relationship is significant with 95% confidence. Also based on this table can be said that the intensity of variable correlation between perceptual Post-Purchase Intention and customer satisfaction is 90/1 percent and this indicates a direct relationship between two variables. On the other hand determine ratio between the two variables perceptual Post-Purchase Intention and customers’ satisfaction is 0/811 shows that the independent variable predict rate of 81/1 percent of a dependent variable.

B. Perceived Usefulness & Post-Purchase Intention

According to the results of statistical analysis concluded sig = 0.000 < 0.05, thus this relationship is significant with 95% confidence. Also based on this table can be said that the intensity of variable correlation between customer satisfaction and Post-Purchase Intention is 87/7 percent and this indicates a direct relationship between two variables. On the other hand determine ratio between the two variables Perceived usefulness and Post-Purchase Intention is 0/769 shows that the independent variable predict rate of 76/9 percent of a dependent variable.

C. Service Quality & Post-Purchase Intention

According to the results of statistical analysis concluded sig = 0.000 < 0.05, thus this relationship is significant with 95% confidence. Also based on this table can be said that the intensity of variable correlation between service quality and Post-Purchase Intention is 95/3 percent and this indicates a direct relationship between two variables. On the other hand determine ratio between the two variables service quality and Post-Purchase Intention is 0/908 shows that the independent variable predict rate of 90/8 percent of a dependent variable.
<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Measurement</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality</td>
<td>CQ1</td>
<td>This value-added service provides complete content</td>
<td>Chae et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>CQ2</td>
<td>This value-added service provides appropriate content</td>
<td>Koos (2003)</td>
</tr>
<tr>
<td></td>
<td>CQ3</td>
<td>This value-added service provides important content</td>
<td>Kim et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>CQ4</td>
<td>This value-added service provides fashionable content</td>
<td>Yang et al. (2005)</td>
</tr>
<tr>
<td></td>
<td>CQ5</td>
<td>This value-added service provides regularly updated content</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CQ6</td>
<td>I can fully understand the content provided</td>
<td></td>
</tr>
<tr>
<td>Navigation and visual design</td>
<td>BV1</td>
<td>I can easily use the value-added service</td>
<td>Chae et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>BV2</td>
<td>This value-added service is displayed in a harmonious way</td>
<td>Koos (2003)</td>
</tr>
<tr>
<td></td>
<td>BV3</td>
<td>I can clearly understand the position of the screen I am currently browsing in the navigation layout</td>
<td>Kim et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>BV4</td>
<td>The homepage of this value-added service can clearly present the location of information</td>
<td>Yang et al. (2005)</td>
</tr>
<tr>
<td>Management and customer service</td>
<td>MS1</td>
<td>This telecom company provides diversified value-added services</td>
<td>Chae et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>MS2</td>
<td>This telecom company provides multiple tariff options</td>
<td>Koos (2003)</td>
</tr>
<tr>
<td></td>
<td>MS3</td>
<td>This telecom company provides good post-services</td>
<td>Kim et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>MS4</td>
<td>I can easily alter the contract of value-added services</td>
<td>Yang et al. (2005)</td>
</tr>
<tr>
<td></td>
<td>MS5</td>
<td>When I have my contract altered, the telecom company still holds a friendly attitude</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS6</td>
<td>When any problem occurs, the telecom company can instantly cope with it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS7</td>
<td>This telecom company provides a FAQ for value-added services</td>
<td></td>
</tr>
<tr>
<td>System reliability and connection quality</td>
<td>SC1</td>
<td>This value-added service system is stable</td>
<td>Chae et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>SC2</td>
<td>Error seldom occurs to this value-added service system</td>
<td>Koos (2003)</td>
</tr>
<tr>
<td></td>
<td>SC3</td>
<td>This value-added service provides effective links</td>
<td>Kim et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>SC4</td>
<td>I can easily return to the screen previously browsed</td>
<td>Yang et al. (2005)</td>
</tr>
<tr>
<td></td>
<td>SC5</td>
<td>It does not take too much time to download the information need</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC6</td>
<td>It does not take too much time to load the links I click on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC7</td>
<td>This value-added service system can instantly react to the data I input</td>
<td></td>
</tr>
<tr>
<td>Perceived value</td>
<td>PV1</td>
<td>I feel I am getting good mobile value-added services for a reasonable price</td>
<td>Cronin et al. (2000)</td>
</tr>
<tr>
<td></td>
<td>PV2</td>
<td>Using the value-added services provided by this telecom company is worth for me to sacrifice some time and efforts</td>
<td>Tung (2004)</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>PV3</td>
<td>Compared with other telecom companies, it is wise to choose this telecom company</td>
<td>Wang et al. (2004)</td>
</tr>
<tr>
<td></td>
<td>CS1</td>
<td>I am satisfied with the value-added services provided by this telecom company</td>
<td>Chae et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>CS2</td>
<td>I think this telecom company has successfully provided value-added services</td>
<td>Lin and Wang (2006)</td>
</tr>
<tr>
<td></td>
<td>CS3</td>
<td>This value-added service is better than expected</td>
<td></td>
</tr>
<tr>
<td>Post-purchase intention</td>
<td>PI1</td>
<td>In the future, I will use the value-added services provided by this telecom company again</td>
<td>Zeithaml et al. (1996)</td>
</tr>
<tr>
<td></td>
<td>PI2</td>
<td>In the future, I will recommend the value-added services provided by this telecom company to my relatives and friends</td>
<td>Cronin et al. (2000)</td>
</tr>
<tr>
<td></td>
<td>PI3</td>
<td>In the future, I will continue to use the value-added services provided by this telecom company</td>
<td></td>
</tr>
</tbody>
</table>
D. perceived value & Post-Purchase Intention

According to the results of statistical analysis concluded sig = / 0.00 / 0.05, thus this relationship is significant with 95% confidence. Also based on this table can be said that the intensity of variable correlation between perceived value and Post-Purchase Intention is 98.1 percent and this indicates a direct relationship between two variables. On the other hand determine ratio between the two variables perceived value and Post-Purchase Intention is 0.962 shows that the independent variable predict rate of 96.2 percent of a dependent variable.

E. perceived value & Post-Purchase Intention

According to the results of statistical analysis concluded sig = / 0.00 / 0.05, thus this relationship is significant with 95% confidence. Also based on this table can be said that the intensity of variable correlation between perceived value and Post-Purchase Intention is 98.1 percent and this indicates a direct relationship between two variables. On the other hand determine ratio between the two variables perceived value and Post-Purchase Intention is 0.962 shows that the independent variable predict rate of 96.2 percent of a dependent variable.

According to amount F=3.413 and obtained signification level can said that there is signification relationship between Total of independent variables with the dependent variable (consumer trust). Standardized beta values show the importance of for each predictor in model. According to results obtained from regression and according to regression coefficient, perceived value has most coefficient (/0.78), after changing perceived value to respectively service quality variables (/0.352), service quality (/0.137), customer satisfaction (-/0.294) have the most to the least effect on Post-Purchase Intention. Means for every unit to improve perceived value, service quality, customer satisfaction increase the amount of customers trust to Mobile value added services.

VI. CONCLUSIONS AND SUGGESTIONS

In this study, a scale for measuring the service quality of mobile value-added services was proposed first. Through exploratory and confirmatory factor analyses, we identified four dimensions of service quality, including customer service and system reliability, navigation and visual design, content quality, and connection speed. The final instrument showed adequate reliability and validity. Further, we also examined the relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. The proposed model was strongly supported by the data collected in Taiwan. Service quality positively influenced perceived value and customer satisfaction, indicating that when telecom companies provide good service quality, perceived value and customer satisfaction can be enhanced. Perceived value positively influenced customer satisfaction. In other words, higher perceived value can lead to higher customer satisfaction. Perceived value and customer satisfaction directly and positively influenced post-purchase intention, where the effect of perceived value was the largest, followed by that of customer satisfaction. Service quality showed no directly positive effect on post-purchase intention. Although service quality has no direct effect on post-purchase intention, service quality could indirectly influence post-purchase intention through perceived value and customer satisfaction.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Post-Purchase Intention</th>
<th>customer satisfaction</th>
<th>service quality</th>
<th>perceived value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>0.901</td>
<td>0.877</td>
<td>0.953</td>
</tr>
<tr>
<td>Sig. (2tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>387</td>
<td>387</td>
<td>387</td>
<td>387</td>
</tr>
</tbody>
</table>

According to the total effects of each construct on post-purchase intention, the constructs can be ranked as follows: perceived value, service quality, and customer satisfaction. This result implies that if telecom companies attempt to induce positive post-purchase intention from mobile value-added service users, such as the intention to refer or repurchase the service, improvement of perceived value should be prioritized. They can evaluate whether the release of a certain value-added service can make customers feel the service is "more valuable than it costs", the benefits of the service for consumers, and the reasonableness of its price. Therefore, users not only use a certain service but also feel the value added of the service, which elevates the simple use of service to enjoyment. In this way, the value-added service can create stickiness of users and even become a real competition advantage. Besides, service quality also plays an important role.

According to the importance of the four dimensions of service quality, telecom companies can improve the quality of value-added services. Through the results of multiple regression analysis, we found the effects of "customer service and system reliability" on perceived value and customer satisfaction were the largest. Therefore, this dimension should be prioritized by telecom companies when improving the quality of mobile value-added services. They can reinforce their customer service through education training and technical support. For instance, with the aid of computer, customer service staffs can quickly and accurately react to customer’s questions, and the FAQ can be regularly updated to meet the present needs. In terms of the stability of wireless networks, the correctness and the stability of connections should be ensured.
whether there is any difference when applied to different longitudinal data to re-verify the proposed model or find out method was adopted. Thus, follow-up studies can collect to the limitation of time, cross-sectional data collection students and graduate students. Follow-up main user group of mobile value-added services (university aspects of sampling respondents, this study selected only the consider as control variables to modify their effects. In the addition, some respondents' characteristics may affect on the should be discussed to have more extensive understanding. In the aspect of connection speed, various technologies should be integrated and developed, and existing base stations should be upgraded to enhance connection speed. In the aspect of navigation and visual design, the limited display of mobile phones should be considered, so as to provide a comfortable and easy-to-operate user interface. If telecom companies can reinforce their service quality, then perceived value and customer satisfaction can be directly improved, post-purchase intention can be indirectly positively influenced, and business profit and competitiveness will be enhanced.

For future research, we suggested that variables that affect consumer’s post-purchase intention (such as switch cost) should be discussed to have more extensive understanding. In addition, some respondents’ characteristics may affect on the results of multiple regressions for example gender, education, and level of value added services usage. There variables may consider as control variables to modify their effects. In the aspect of sampling respondents, this study selected only the main user group of mobile value-added services (university students and graduate students). Follow-up studies can extend this scope to other consumer groups. Due to the limitation of time, cross-sectional data collection method was adopted. Thus, follow-up studies can collect longitudinal data to re-verify the proposed model or find out whether there is any difference when applied to different customer groups.

REFERENCES


BIography

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