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TEACHER CREDENTIALS AND STUDENTS' MATHEMATICS PERFORMANCE ACROSS ASIAN COUNTRIES

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ABSTRACT

The purpose of this study is to analyze the impact of teacher credentials on the mathematics performance of students based on TIMSS 2011 Mathematics Scores of the top ten(10) and bottom ten (10) Asian performing countries. Exploratory procedure of data analysis via forced cluster analysis and formal test of statistical hypotheses through t-tests and regression analysis were used in the study. Results showed that there are four (4) out of six (6) teacher credentials namely; teachers with mathematics education major, teachers with mathematics major, induction program and supervised practicum have statistically significant bearing on the total quality of mathematics performance across Asian countries.

KEY-WORDS: cluster analysis, confirmatory methods, mathematics performance, teacher credentials

INTRODUCTION

Questions underlying teacher credentials as part of teacher qualifications on student performance are not new. Indeed, over the years, several observers of education process have explored and studied on this and found inconsistencies of the results as stated by American Association of Colleges for Teacher Education (AACTE 2010) as cited by Montalbo and Pogoy (2010). Some studies used measurable proxies such as teachers' years of experience, level of professional development and level of educational degrees and failed to identify any direct link towards student performance in mathematics.

Goe (2008) indicated that researches on student achievement linked to teacher quality are not successfully identified. Clotfelter (2007) also cited that the quality of the student achievement differs in terms of teacher quality while Sawchuk (2011) also noted that the most important school-based factor that affects achievement is the teacher quality. Up to this time, there is no concluding study on the impact of teacher factor focusing on the teacher credentials linked to students' performance. However, information about teacher education collected from the forty-two (42) participating countries of Trends in International Mathematics and Science Survey (TIMSS) contains reliable and wide range of data about teacher credentials and student performance. The sheer volume of data collected is sufficient reason to embark on a detailed analysis of the impact teacher credentials on students' performance.

Our study focuses on the teacher credential factors such as (1) percentage of mathematics major teachers, (2) percentage of mathematics education major teachers, (3) completion of induction program, (4) teachers' qualifying examination, (5) teachers' experience, (6) supervised practicum as they relate with the TIMSS 2011 mathematics scores of the selected Asian countries. The main focus of this study is to find out the teacher credentials that affect student performance in mathematics across Asian countries and to examine these teacher credentials as indicators of the teacher qualifications that influence the quality of mathematics teaching in the basic education of the country.

1. REVIEW OF THE LITERATURE

Ensuring elementary and secondary schools with effective teachers remains to be a tight spot across the world educational system according to Ingersoll (2007). Teachers who were not able to master the curriculum and were not able to meet the minimum standards for admission are some probable reasons for educational quality (UNESCO, 2004).

As cited by Yunus, Hamzah, Ismail (2008), it is recommended to have the seven domain of teacher's professional knowledge to the subject matter, pedagogical content, other contents, curriculum, learners, educational aims, and general pedagogy. To obtain these components, the Malaysian University used two curriculums in training their secondary mathematics teacher. Teachers must first earn Bachelor of Science (Mathematics with education) degree or Bachelor of Education (Mathematics) degree as part of the undergraduate program followed by a Postgraduate Diploma of Education (DPE). This assures teachers' quality programs. A study done by Chang and Wu (2007) showed that on the first few years of mathematics teachers with math and science background, poor teacher-student interaction happened due to the inadequate instructional approach. But after four years in service, they already gain more confidence in teaching than those who are not specializing math and science.

Typically, lesser learning is produced by a beginning teacher than to those teachers with more experience. Hence, teachers grow their effectiveness over at least five years on the job as cited by Clotfelter, Ladd, Vigdor (2007). Certification proves that a teacher have fulfilled the required standards that are approved upon by the educational stakeholders (Leak and Farkas, 2011). Teacher certification has no renewal and it's a lifelong validity. When the program is approved and completed, course credits certificates are given in Japan while in Korea; initial teacher's certificate is awarded. The initial teaching certificate is valid to all countries except for Australia and U.S. This certificate is an indication that the teacher completed the preprimary necessity for teaching. On the other hand, there is no other certification required further than the education and curriculum in Hong Kong and Singapore (Wang, Coleman, Coley, Phelps, 2003).

According to the National Commission on Teaching and America's Future (NCTAF), to have competent teachers in both content and pedagogy, certification and licensure are given consideration to improve student achievement (Sparks, 2004). Thus, teacher licensure also seems to matter (Clotfelter, Ladd, Vigdor, 2007).

In terms of induction program, Korea and Netherlands do not provide new teacher support programs. In Hong Kong, seminars and workshops are offered for the new teachers but there is no national policy on this. For countries like Singapore whose induction program is run by the national ministry, it is a requirement by the national government. In Japan, the state required a strong monitoring of the program. Teachers who attended the induction program are compensated either of the two: payment with the regular salary or reduced workload. But in Hong Kong, the teacher pays for it and repayment follows (Wang, et.al. 2003).

In the surveyed done by Educational Testing Center (ETC, 2003), all countries required student teaching or other in-school practical experiences. A practical experience ranges from three to four weeks in Japan and four to six weeks in Korea towards the end of their teacher education program. In Hong Kong, students are required to teach a minimum of eight to ten weeks before graduation. In Singapore, a total of ten weeks are required nine weeks in compulsory practicum and one week in school experience (Wang, et.al. 2003).

In Hong Kong, it is not required to complete the professional preparation for teaching to be employed. Teachers can begin teaching before or during the preparation and training (Ingersoll, 2007).

Frome, Nasaster and Cooney (2005) as cited by Goe and Stickler (2008), few studies point out that a teacher who is a graduate or undergraduate with mathematics as major is related to student higher achievement in high school. It is also suggested that percentage of teachers who undergo monitoring and induction program can be related to school-level achievement. Buddin and Zamarro (2009) indicated that there is a weak relationship between teacher credentials (experience and licensure) and student achievement.

2. RESEARCH DESIGN AND ANALYTICAL FRAMEWORK

This study made use of the bipolar analysis where the top 10 performing Asian countries who participated in TIMSS (2011) were contrasted with the bottom 10 performing Asian countries in terms of teacher credentials. The measurement of the teacher credentials are given in Table 1.

Variable	Code	Measurement
Percentage of Mathematics Majors	Math Majors	Percent of every hundred
Percentage of Mathematics Education Major	Math Ed Majors	Percent of every hundred
Completion of Mentoring or Induction Program	Induction	0 = No 1 = Yes

Passing a Qualifying Examination (e.g., licensing, certification)	Licensure	0 = No 1 = Yes
Percentage of Teachers having 5 or more years of experience	Experience	Percent of every hundred
Supervised Practicum During Teacher Education Program	Practicum	0 = No 1 = Yes

Table 1 : Definition of Variables under the Teacher Credentials

The data for this research study were based from the published TIMSS 2011 results. In order to obtain the comparison of the teacher credentials of the top performing countries and low performing countries in Asia we presented exploratory analysis that includes finding the profiles of these countries in terms of teacher credentials. To be concise, we referred this technique as “forced cluster analysis” although, technically speaking we have not performed real cluster analysis. With the profile exploration, we compared the two groups in terms of these variables either by using a simple t-test for independent samples or by a chi-square contingency analysis. Finally, for those variables found to be significant as a differentiating characteristic between the top performing countries and the low performing countries in Asia we proceeded to perform a regression analysis in order to ascertain their joint relative contribution in the Mathematics scores of the students in these countries.

3. RESULTS

In the preliminary data exploration, we performed a cluster analysis in such way that the top performing Asian countries are clustered as one and the low performing Asian countries are clustered as another. The different variables of each cluster were then analyzed and the results are shown in Table 2:

Variables	Cluster1 (Top 10)	Cluster2 (Bottom 10)	Grand Centroid
Scores	584.1667	418.5000	468.2000
Math Majors	34.8333	48.2143	44.2000
Math Ed Majors	50.8333	29.1429	35.6500
Experience	78.3333	80.2857	79.7000
Licensure	0.8333	0.5714	0.6500
Induction	0.6667	0.3571	0.4500
Practicum	1.0000	0.5714	0.7000

Table 2 : Cluster Analysis of Low and Top Performing Countries in Asia

Tabular result showed that the top 10 performing Asian countries have greater percentage of mathematics education teachers, have higher percentage of passing the qualifying examinations for teachers, have more teachers who completed mentoring or induction program and have more teachers with supervised practicum during the teacher education program. However, in the bottom performing countries in Asia, there are more teachers who are mathematics majors and more teachers teaching mathematics in more than five (5) years in these countries.

After clustering, statistical testing of the variables takes place. Table 3 shows the results of the comparison between the TIMSS mathematics scores as it relates to the different teacher credentials.

Variable	t-value	Interpretation
Math Majors	2.20	Significant, p < 0.041
Math Ed Majors	5.02	Very Significant, p < 0.000
Experience	0.91	Not Significant, p > 0.377
Licensure	1.41	Not Significant, p > 0.177
Induction	2.47	Significant, p < 0.024
Practicum	2.61	Significant, p < 0.018

Table 3 : Comparison of the TIMSS Math Scores Based on Teacher Credentials

Out of the six (6) variables used, four (4) were found to be statistically significant in relation to the TIMSS (2011) mathematics scores. These variables were the following: teachers with Mathematics major, teachers with Math Education major, complete induction program and the supervised practicum during the teacher education program.

Table 4 shows the analysis performed to ascertain the joint effects of these three (4) individually significant determinants of student performance in Mathematics:

The regression equation is

$$\text{Scores} = 514 - 0.49 \text{ Math Major} + 3.09 \text{ Math Ed} - 1.92 \text{ Experience} \\ + 63.9 \text{ Licensure} + 11.3 \text{ Induction} - 37.5 \text{ Practicum}$$

Predictor	Coef	SE Coef	T	P
Constant	514.1	167.1	3.08	0.009
Math Maj	-0.493	1.267	-0.39	0.704
Math Ed	3.095	1.497	2.09	0.043
Experien	-1.919	1.748	-1.10	0.292
Licensur	63.93	36.33	1.76	0.102
Inductio	11.33	39.97	0.28	0.781
Practicu	-37.54	52.34	-0.72	0.486

S = 70.13 R-Sq = 53.8% R-Sq(adj) = 32.5%

Table 4 : Regression Analysis with TIMSS Mathematics Scores as Dependent Variable

Of the four (4) teacher characteristics analyzed, teachers with Math education majors turned out to have the highest influence on the final outcome as measured by the TIMSS mathematics. Together, these variables explained about 53.8% of the variance in the mathematics scores observed under TIMSS (2011) results.

4. DISCUSSION

This study has established the link between the teacher credentials and students performance which is a significant factor in the teaching of mathematics towards quality of basic education. Although many research studies have proven the link of the two, some have opposed and denied on the relationship of the teacher credentials and students performance.

1. Math Ed majors registers significant impacts on the ultimate performance of the students. Teachers academic skills is a strong link to student achievement as cited by Wayne and Young (2003); Eide, Goldhaber and Brewer(2004) and Hanushek and Rivkin (2006). Being teachers having Mathematics as a major is not enough. For effective and efficient teaching, they need the pedagogy appropriate for the contents that they are teaching to their students. Ngo (2013) noted that pedagogical content knowledge is a critical component of teacher quality that link to student achievement.

2. Induction program supports professional advancement of new teachers. It is a pace in a range of expertise learning for teachers to sustain effective instruction, knowledge, and evaluation practices. According to Ingersoll (2011) students who had higher scores or gains taught by beginning teachers who had participated induction programs. Based from the analysis of this study, countries that required induction program produce good students. As cited by Montalbo and Pogoy (2010) having this support program would lead to student's high performance in Mathematics and quality basic education. Thus, induction program is important in charting the course of quality for basic education.

3. In the teacher education programs, supervised practice teaching is found to be significant in the educational system. As cited by Boyd, Grossman, Lankford, Loeb, & Wyckoff (2008), the student teaching experience of the math teachers found to be most effective in the performance of the students. It gives the necessary skills of the math teachers needed to teach their students. It gives exposure to future teachers of the real situations in the classroom and prepares them with the challenges they will face in the teaching profession.

4. The analysis indicates that experience and licensure are not indicators of quality educators. Number of teaching years does not have an impact on student's performance. From the analysis of Goe (2008), hiring educators with

more than five years of experience may not result to student improvement. The difference between certified and uncertified teachers is the level of knowledge and skills but these do not marked to single out the student performance gain. Thus, passing in the licensure examination is not an assurance that students will have a greater achievement in mathematics.

Teacher credentials (teachers with Mathematics and Math Education majors, supervised practice teaching, and teacher induction program) have significant impacts on students' performance across Asian countries which, in turn spells the countries' quality on basic education especially in Mathematics.

5. CONCLUSION

Teacher credentials (teachers with Mathematics and Math Education majors, supervised practice teaching, and teacher induction program) have significant impacts on students' performance across Asian countries which, in turn spells the countries' quality on basic education especially in Mathematics.

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THE CONTINUED USE OF INTERNET BANKING: COMBINING UTAUT2 THEORY AND SERVICE QUALITY MODEL

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ABSTRACT

While the UTAUT theory (Venkatesh et al. 2003) was applied to explain Internet banking adoption, the new UTAUT2 model (Venkatesh, Thong, and Xu, 2012) is not yet applied in this domain. Recognizing the particularities of managing financial products, this research pay particular attention to the consumer context and focuses on the online banking services. Thereby, service quality factors were introduced from marketing literature to take into account the specificities of the financial businesses which are more integrated in the customer relationship perspective. To well understand the determinants of the continued use of Internet banking two models - UTAUT2 and Service Quality - are combined for the first time. We found that the proposed model tested has a stronger explanatory power than the original UTAUT model and the extended UTAUT2 model too. The findings reveal that performance expectancy, habit, website design, and security are significant determinants of the intention to continue using electronic services of the banks. The theoretical and managerial implications of these results are discussed.

KEY-WORDS: Unified theory of acceptance and use of technology (UTAUT), UTAUT2, service quality, Internet banking, technology use.

1. Introduction

Internet support many web-based applications to deliver new services and products and to retain customers (Yadav et al., 2014, Vatanasombut, et al. 2008; Liao and Cheung, 2002). In e-services context such electronic banking, businesses are either reengineered or completely automated through sophisticated web-based technologies (Saini, Grewal, and Johnson, 2010 ; Ding and Straub 2007). Actually, most banks have deployed Internet based systems in an attempt to improve their interactions with customers and to reduce their costs (Hanafizadeh, Keating, and Khedmatgozar, 2014; Safeena, Kammani, and Date, 2014; Mishra, and Singh 2014).

This revolution, named Internet banking, has radically changed the ways of delivering services and dealing with customers. It has enabled individuals to complete their transactional activities in a cost effective way with more flexibility and regardless of their physical location (Hanafizadeh, Keating, and Khedmatgozar, 2014; Goh, and Kauffman, 2013). Despite the growing interest for the Internet banking, the question of its adoption and the reasons motivating the users to accept such technological innovation are still subject of debate (Hanafizadeh, Keating, and Khedmatgozar, 2014; Hoehle, Scornavacca, and Huff, 2012), mainly in developing countries such Saudi Arabia (Alsharif, 2013; Al-Ghaith, Sanzogni, and Sandhu, 2010).

There have been several theoretical models employed to explain the acceptance and use of the Internet banking (Hanafizadeh, Keating, and Khedmatgozar, 2014; Hoehle, Scornavacca, and Huff, 2012). One of the most used theories is the unified theory of acceptance and use of technology (UTAUT) presented by Venkatesh et al. (2003) which is based on synthesis of eight models of technology adoption, primarily in organizational contexts. Building on past studies related to UTAUT applications in the Internet banking, the objective of this paper is to focus on the consumer context by using the UTAUT2 model proposed recently by Venkatesh, Thong, and Xu (2012).

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While the original UTAUT model (Venkatesh et al. 2003) was applied to explain the adoption of electronic systems, the new UTAUT2 model is not yet applied for understanding the Internet banking acceptance and use.

In addition, recognizing the particularities of managing financial products (Rajaobelina, et al. 2014; Schmidt, and Buxmann, 2011), this research pay particular attention to the consumer context and focuses on the online banking services. Thereby, this study introduces service quality factors from marketing literature (Gadalla, Keeling, and Abosag, 2013; Parasuraman, Zeithaml, and Malhotra, 2005; Wolfinbarger, and Gilly, 2003) to take into account the specificities of the financial businesses which are more integrated in the customer relationship perspective. This perspective is based on intensive coordination, mutual commitment and anticipation of future interactions between customers and Internet services providers (Authors, 2012, 2013, Vatanasombut et al., 2008; Crosby, Evans, and Cowles; 1990). Thus, our research will merge UTAUT2 theory with service quality model to test the intention of continued use of Internet banking.

This paper is organised as follows. First, we present the concept of Internet banking and discuss the current situation in Saudi Arabia. After that, we expose an overview of the unified theory of acceptance and use of technology (UTAUT) and present the modifications brought to UTAUT to fit the consumer context. Then, we discuss the relevance of adding "service quality factors" to enrich the UTAUT2 model. Then our research model and the hypotheses will be presented. In the next section, the method, measures, and results of the study will be exposed. Finally, we present the conclusion and future research directions in the end of the paper.

2. Internet banking in Saudi Arabia

The literature proposes many terms to identify Internet banking, such as electronic banking, online banking, and e-banking. While these terms share some meanings, they are not really similar. In this research, Internet banking refers to the banking services delivered electronically and exclusively through the web. Other channels may deliver electronic services such as ATM and mobile phone, but we focus here on banking services delivered only via the web site of the bank.

Internet banking offer to customer a wide range of electronic services as managing current account, paying bills, transferring funds, printing statements, and inquiring about account balances (Hanafizadeh, Keating, and Khedmatgozar, 2014; Safeena, Kammani, and Date, 2014; Mishra, and Singh 2014). Furthermore, Internet banking constitutes a platform to support other electronic applications, like online shopping, online auction, and online stock trading. From the point of view of the banks, Internet banking offers many benefits. Among them, the cost savings compared with the traditional channels, the reduction of branch networks and the possibility of mass customization. From the customer view, there is an increase in the autonomy, a less dependency on bank's branch, more flexibility in doing banking transactions, and consequently, saving time and effort for the clients (Martins, Oliveira, and Popovič, 2014; Hanafizadeh, Keating, and Khedmatgozar, 2014; Safeena, Kammani, and Date, 2014; Mishra, and Singh 2014).

Saudi Banks are interested for Internet banking for two reasons at least: to face the challenges in the banking sectors, and to capture benefits offered by the new online channel. With approximately 20 million Saudis and an additional 10 million expatriates (Central Department of Statistics and Information, 2013), banks in Saudi Arabia try to develop new ways for doing business and explore more innovative delivery channels to satisfy the evolving needs of this population.

In addition, Saudi population is predominantly composed by young people who are more willing to use Internet technologies for their interactions with the banks (Sohail, and Al-Jabri, 2014). In fact, Internet penetration is on constant rise in Saudi Arabia, creating therefore a higher demand on electronic banking services. According to the report published by the Central Department of Statistics and Information in 2013, the number of Internet users in the Kingdom of Saudi Arabia continues to go up rapidly, reaching about 18.1 million at the end of first quarter of 2014, with a population penetration of 58.1%. Increased demand for Internet services and broadband was observed due to high use of social networking applications, video downloading and gaming. Customers are seeking higher speeds and larger packages resulting in heavy data traffic on both mobile and fixed networks. It is expected that the demand for Internet services will continue to increase significantly over the next few years as a result of the availability of high speed fiber-optic networks, increased Internet content, and the continued spread of handheld smart devices and applications.

This evolution of the Internet environment (technology and users) has a positive effect on Internet banking progression. Electronic services such as current account management, payment of bills, personal loans, brokerage services, mutual funds, issuance of credit cards, etc., are currently available in most Saudi Banks. Moreover, many banks have adopted the Internet in conjunction with an existing network of ATMs, WAP and mobile payment services.

Most of the Saudi Banks have adopted the integrated approach whereby they keep their existing brand name and offer Internet banking services as an extension to their branch, ATM and telephone based services.

Despite the increase of the Internet users and the development of the technology, Internet banking in Saudi Arabia is not yet widely used by individuals. In fact, in developed markets, Internet banking has been growing by an average of 10 percent per year over the past decade, helping banks reduce costs, improve response times, and provide higher quality.

By contrast, Internet banking in the Arab states of the Gulf Cooperation Council (GCC) has not yet reached that level of maturity. Only a third of all GCC bank customers have signed up for online services, and only half of those, 18 percent of total customers, are active online (Garbois et al., 2013). According to the report (cf: The State of ICT Market Development in Saudi Arabia, Online, Field Work (x3) & Interviews: 2009 - 2010 available at <http://www.citc.gov.sa/English/Reportsandstudies/Reports/Pages/default.aspx>) published by the CITC (Communications and Information Technology Commission) in Saudi Arabia, 17% of individuals and 33% of establishments use the Internet banking services. Small and Medium Enterprises are the least active actors in this domain with only 8% using e-banking services. However, several elements including demographics and user profiles indicate that Internet banking in this region has a promising future.

3. Theoretical background

In this section, we present an overview of the unified theory of acceptance and use of technology (UTAUT) and present the modifications brought to UTAUT to fit the consumer context. Then, we discuss the relevance of adding service quality factors as new constructs to extend the UTAUT2 model in the Internet banking context.

3.1. From UTAUT to UTAUT2

Different theories have been proposed in the literature to study the acceptance and use of IT. The well-known theoretical models which have been mobilized to explain the adoption behavior at the individual level was the Theory of Reasoned Action (TRA - Fishbein and Ajzen, 1975), the Theory of Planned Behavior (TPB - Ajzen, 1991), and the Technology Acceptance Model (TAM - Davis, 1989). Both TRA and TPB consider that adoption behavior is driven by behavioral intentions which are a function of an individual's attitude and external factors. TPB is presented as an extension of TRA applied to behaviors that are not entirely under volitional control. TAM is an adaptation of the TRA in the field of information systems. TAM used TRA as a theoretical basis to explain information technology acceptance and use. Attitude towards using IT in TAM is determined by perceived ease of use (PEOU) and perceived usefulness (PU). These two beliefs create a favorable behavioral intention (BI) toward using the IT which is consequently affects its actual use. The extended technology acceptance model (TAM2 - Venkatesh and Davis, 2000) includes subjective norms as additional determinant of intention to use.

Based on the examination of eight models, TRA, TPB, TAM, Motivational Model (MM- Davis, Bagozzi, and Warshaw, 1992), hybrid model combining TAM and TPB (C-TAM-TPB, Taylor and Todd, 1995), Model of PC Utilization (MPCU- Thompson, Higgins, and Howell, 1991), Innovation Diffusion Theory (IDT- Moore and Benbasat, 1996), and Social Cognitive Theory (SCT- Compeau and Higgins, 1995), Venkatesh et al. (2003) developed Unified Theory of Acceptance and Use of Technology (UTAUT) as a comprehensive synthesis of prior technology acceptance research.

The UTAUT was developed for an employee acceptance and use setting. Its focuses on the determinants of behavioral adoption of the technology in organizational context. UTAUT has four key constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) which act as determinants of behavioral intention and/or technology use behavior. In addition, UTAUT identifies four key moderator variables: gender, age, experience, and voluntariness of use.

Since its original publication in 2003, UTAUT has served as theoretical basis to study different technologies in both organizational and non-organizational settings and there have been many applications of the entire or a part of the model (Venkatesh and Zhang, 2010, Van Raaij and Schepers, 2008; Gupta, Dasgupta, and Gupta, 2008). Building on this past studies related to UTAUT, Venkatesh, Thong, and Xu (2012) proposed UTAUT2 to explain the acceptance and use of the technology in a consumer context. A context which represents some specificities compared to the organizational setting. Thereby, Venkatesh, Thong, and Xu (2012) introduced additional constructs, added new relationships, and deleted one construct from their original model. Compared to UTAUT, the extensions proposed in UTAUT2 produced a substantial improvement in the variance explained of technology use.

The UTAUT2 model (figure 1) presents seven constructs (performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit) as determinants of behavioral intention and/or use of a technology by consumers. In addition, three individual differences (age, gender, and experience) were added as moderator variables. *Performance expectancy* is defined as the degree to which using a technology will provide benefits to consumers in performing certain activities; *effort expectancy* is the degree of ease associated with consumers' use of technology; *social influence* is the extent to which consumers perceive that important others believe they should use a particular technology; *facilitating conditions* refer to consumers' perceptions of the resources and support available to perform a behavior; *hedonic motivation* is defined as the fun or pleasure derived from using a technology; *price value* is defined as the consumers' cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them; and *habit* is defined as the extent to which people tend to perform behaviors automatically because of learning.

According to UTAUT2, these seven constructs are theorized to influence behavior intention to use a technology, while facilitating conditions and habit determine the technology use behavior.

In addition, individual variables, namely age, gender, and experience are presented to moderate different UTAUT2 relationships. In figure 1, the lighter lines represent the original model of UTAUT and the darker lines show the new relationships. It is worthily noted that compared to the original UTAUT model, voluntariness construct (as a moderator) was dropped to make UTAUT2 more suitable to the consumer voluntary behavior context. UTAUT2 has been tested in the context of the mobile Internet consumers in Hong Kong. The results showed that compared to UTAUT, the extensions proposed in UTAUT2 produced a substantial improvement in the variance explained in behavior intention and technology use.

3.2. Service quality and behavioral intention and use of IT

The service quality (SQ) literature has been developed by marketing researchers to evaluate the customer perceptions of the service provided by a vendor in the personal environment (Parasuraman, Zeithaml, and Berry, 1985). Later, the marketing studies about service quality have been used by IS researchers to assess the quality of the service delivered by the IS department (Pitt, Watson, and Kavan, 1995). The users of the information systems replace the customers, and the IS department is considered as an internal service provider. Pitt, Watson, and Kavan (1995) added service quality as a new dimension to DeLone and McLean (1992) as an antecedent of the technology use and user satisfaction.

In 2003, DeLone and McLean proposed an updated IS success model in which service quality construct influences the IT use (or intention to use) directly or indirectly via user satisfaction. With the advent of the Internet, there was a shift from the organizational environment to the online environment, and from the IS users to e-services users. Consequently, service quality represents not only the technical issues of the IT, but also the support delivered by the technology. Xu, Benbasat, and Cenfetelli (2013) noted that service quality in the online environment reflects the overall support delivered by and via the Internet interfaces. This idea is increasingly shared by different authors who consider that service quality represents more the effectiveness of the support capabilities than the quality of the system itself (Petter, DeLone and Mclean, 2008; DeLone and McLean, 2004).

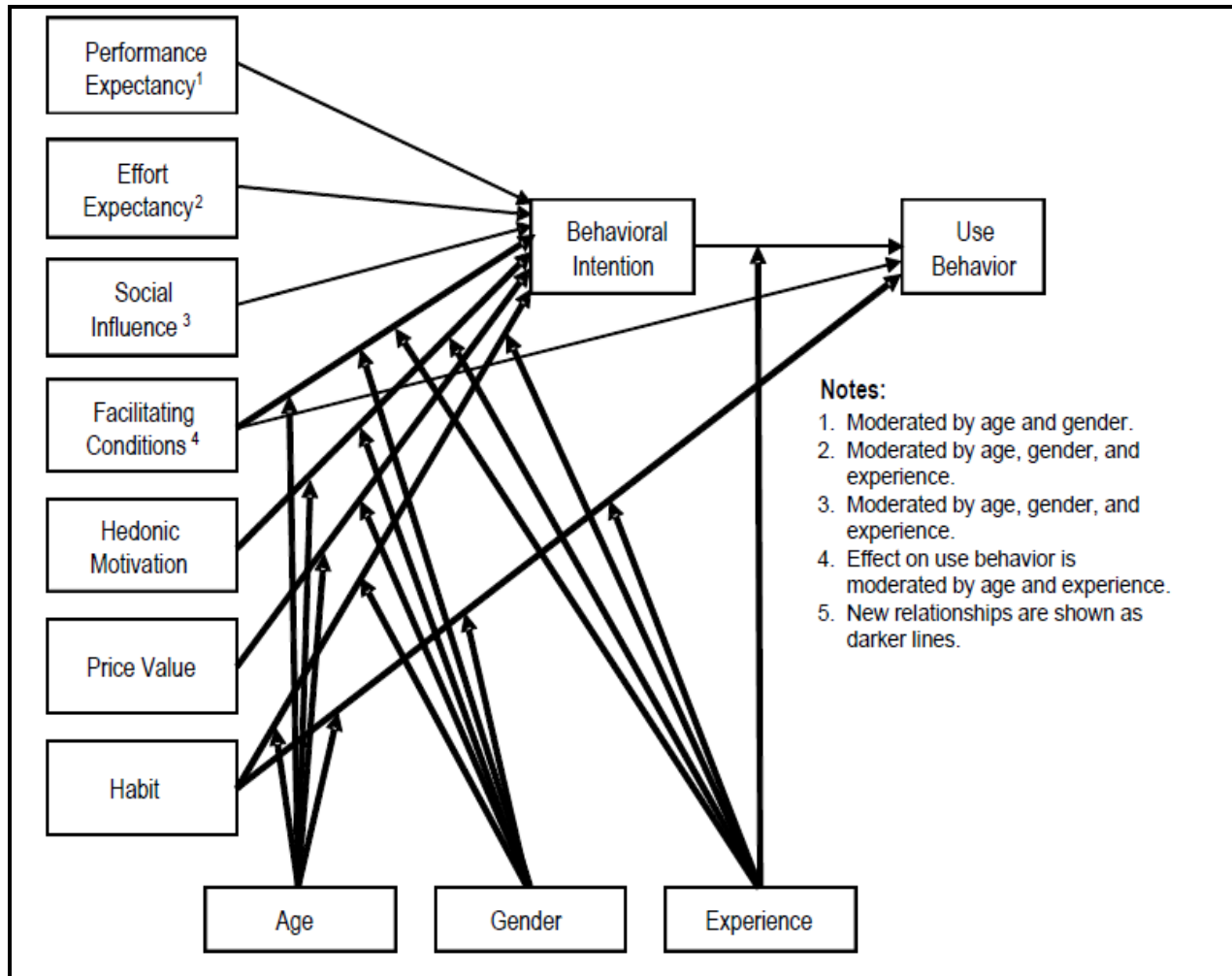


Figure 1. UTAUT2 Research Model of Venkatesh, Thong, and Xu (2012).

Previous research have mentioned that in the e-service context, it is more difficult to separate service quality from the system itself and from the information delivered, since they are all computer-mediated (Xu, Benbasat, and Cenfetelli, 2013). Other studies have outlined earlier that service quality is more important in virtual environment than ever before, because user become consumer rather than employee, and thus poor support leads to low use and then loss of customers (Peter, DeLone, and McLean, 2013; DeLone and McLean, 2004).

While previous models such TAM and UTAUT focus on technical quality to explain attitude and behavioral intention to use IT, they leaves out important variables reflecting support capabilities (Xu, Benbasat, and Cenfetelli, 2013). Delone and McLean (2003), among others, have called for the inclusion of service quality factors to well understand of behavioral intention and use of IT, especially in online service context. Service quality which includes both content and delivery of electronic service goes beyond individual characteristics and system features to predict the adoption of Internet-based technologies. Empirically, many studies have used service quality factors as antecedents of attitude and intention toward using Internet technologies either directly (Sambasivan, Wemyss, and Rose, 2010; Wangpipatwong, Chutimaskul, and Papisratorn, 2009) or indirectly (Elmorshidy, 2013; Xu, Benbasat, and Cenfetelli, 2013).

4. Research model and hypotheses development

Our research model is presented in Figure 2. It shows the original UTAUT2 model (direct effects) and our suggested new relationships. According to UTAUT2, seven constructs are represented as direct determinants of behavioral intention to use Internet-based technology by a consumer. In our case, these constructs will be used to explain the

intention of continued use of Internet banking: performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), and habit (HA).

Regarding the moderating effects, age, gender, and experience are not used in this research for two reasons. First, these moderators seem to have no significant effects (First-order interaction terms particularly) in the study of Venkatesh, Thong, and Xu (2012). Second, some authors found that age, gender, and experience have no significant moderating effects on the behavioral intention and use of Internet banking (Martins, Oliveira, and Popović, 2014; Riffai, Grant, and Edgar, 2012). In the following, we define each construct of our UTAUT2-SQ model, and we specify the research hypotheses.

Performance expectancy is defined as the degree to which using Internet banking will provide benefits to consumers in performing certain activities (Venkatesh, Thong, and Xu (2012). It reflects user perception of performance improvement by using Internet banking (Martins, Oliveira, and Popović, 2014; Zhou, Lu, and Wang, 2010). Performance expectancy is similar to the perceived usefulness of TAM and the relative advantage of IDT (Venkatesh et al. 2003). According to UTAUT2 and past studies about the Internet banking adoption (Martins, Oliveira, and Popović, 2014; Riffai, Grant, and Edgar, 2012), we propose the following:
H1. *Performance expectancy has a positive effect on intention of continued use of Internet banking.*

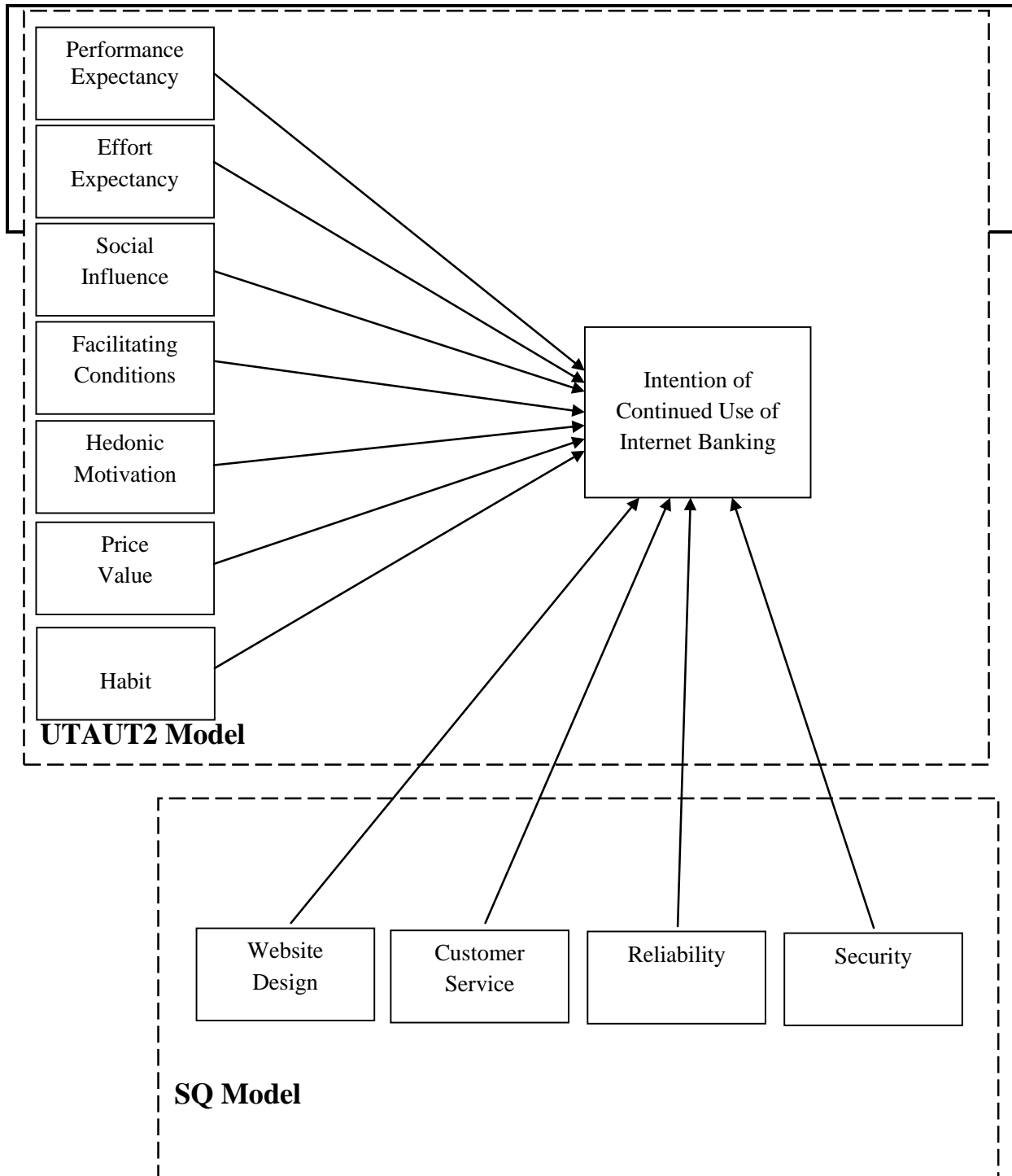


Figure 2. Research Model: UTAUT

Effort expectancy is defined here as the degree of ease associated with consumers' use of Internet banking (Venkatesh, Thong, and Xu, 2012). It is equivalent to the perceived ease of use of TAM and the complexity of IDT (Venkatesh et al. 2003). In the UTAUT2 model, effort expectancy is presented as a direct determinant of intention to use a technology in the consumer context. Others studies reported the existence of positive significant correlation between the effort expectancy and behavioral intention to use online banking (Riffai, Grant, and Edgar, 2012).

Martins, Oliveira, and Popović (2014) found also that effort expectancy has a direct positive impact on the behavioral intention of using Internet banking. Thus, we propose the following:

H2. *Effort expectancy has a positive effect on intention of continued use of Internet banking.*

Social influence is the extent to which consumers perceive that important others believe they should use Internet banking technology (Venkatesh, Thong, and Xu (2012). Social influence reflects the effects of environmental factors such as the opinions of user's friends, relatives, and superiors on user behavior and is similar to subjective norms of TRA (Venkatesh et al. 2003). Empirically, prior studies have confirmed that social influence has a positive effect on consumer intention to use Internet banking (Nasri and Charfeddine, 2012) and it affects significantly user adoption of mobile banking (Zhou, Lu, and Wang, 2010). Thus, we propose the following:

H3. *Social influence has a positive effect on intention of continued use of Internet banking.*

Facilitating conditions refer to consumers' perceptions of the resources and support available to support the use of Internet banking (Martins, Oliveira, and Popović, 2014; Venkatesh, Thong, and Xu, 2012). This concept is similar to perceived behavioral control of TPB which reflects the degree to which an individual feels that performing a behavior is under his volitional control. The users of Internet banking need to have, for example, certain computer skills and IT knowledge for using e-banking services. According to UTAUT2, facilitating conditions have a direct impact on behavioral intention, and previous research reveals its positive impact on intention to use Internet banking (Nasri and Charfeddine, 2012). Thus, we propose the following:

H4. *Facilitating conditions have a positive effect on intention of continued use of Internet banking.*

Three new constructs, named hedonic motivation, price value, and habit are added to the original UTAUT model as antecedents of IT use in the consumer context. Venkatesh, Thong, and Xu (2012) found (in their model of direct effects) that these factors have positive effect on intention of using mobile Internet technology. According to Venkatesh, Thong, and Xu (2012), *hedonic motivation* can be defined as the fun or pleasure derived from using Internet banking; *price value* is defined as the consumers' cognitive tradeoff between the perceived benefits of Internet banking and the monetary cost for using it; and *habit* is defined as the extent to which people tend to use Internet banking automatically because of learning. Based on the UTAUT2, we propose the following:

H5. *Hedonic motivation has a positive effect on intention of continued use of Internet banking.*

H6. *Price value has a positive effect on intention of continued use of Internet banking.*

H7. *Habit has a positive effect on intention of continued use of Internet banking.*

In our research model (figure2), service quality model is added to UTAUT2 model to explain the continued use of Internet banking. The conceptualization of service quality that includes considerations of both content and delivery is adopted to enrich UTAUT2 model which focuses mainly on the technical features related to the system. In fact, when a user perceives a higher quality of what is offered (content) and a higher quality of how it is offered (delivery) in a website, the customer's perceived service quality will be higher (Xu, Benbasat, and Cenfetelli, 2013). In this research four dimensions adapted to the retailing banking setting are used: website design, customer service, fulfillment, and security (Herington, and Weaven, 2009, Sohail, and Shaikh, 2008, Wolfenbarger, Gilly, 2003). These factors cover the content and the delivery of bank's website, and are used successfully to assess the quality for Internet banking services (Gupta, and Bansal, 2012, Herington, and Weaven, 2009, Sohail, and Shaikh, 2008). Empirically, several studies found that service quality factors influence the use of Internet-based technologies either directly (Sambasivan, Wemyss, and Rose, 2010; Wangpipatwong, Chutimaskul, and Papasratorn, 2009) or indirectly (Elmorshidy, 2013; Xu, Benbasat, and Cenfetelli, 2013). Thus, we propose the following:

H8. *The four dimensions of service quality (website design, customer service, fulfillment, and security) have a positive effect on intention of continued use of Internet banking.*

5. Data collection and measurement

We adopted the snowball sample method which is used in previous researches in the Internet banking domain, and this sampling method seems to be suitable to the Saudi Arabian context (Sohail and Shaikh, 2008). A questionnaire was distributed by the researchers to colleagues, students and university staff who are current users of Internet banking services. These participants are then asked to help us for the distribution of the questionnaire to their friends and relatives who are likely to perform electronic banking activities. Overall, 420 questionnaires were distributed hand to hand and 133 usable questionnaires were received (response rate of 32%). The questionnaire was initially developed in English and the final version was translated into Arabic. In order to ensure the equivalence of

measurements in the two languages, the translation was reviewed by a third party. The questionnaire was finalized after correcting a few minor differences in wording in the two languages. Table 1 shows the demographic information of respondents in terms of gender, age, education, and current profession.

All of the measures used were adopted from prior research. Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit are adopted from Venkatesh, Thong, and Xu (2012). Website design, customer service, fulfillment, and security are used from Wolfinbarger and Gilly (2003). All items were measured using a seven-point Likert scale, with the anchors being “strongly disagree” and “strongly agree.”

Table1
Profile of the respondents

Demographics	Frequency	%
Gender		
Female	55	41%
Male	66	50%
Missing	12	9%
Age (years)		
< 20	4	3%
20-29	38	29%
30-39	50	38%
> 40	41	31%
Education		
High school or less	11	8%
Diploma degree	16	12%
Bachelor’s degree	76	57%
Other	24	18%
Missing	6	5%
Current profession		
Student	15	11%
Executive/senior management	13	10%
General administration/supervisory	90	68%
Others	14	11%
Missing	1	1%
Internet Experience (years)		
< 1	6	5%
1-3	21	16%
4-6	24	18%
> 6	77	58%
Missing	5	4%

6. Data analysis and Results

PLS-SEM is a promising method that offers vast potential for SEM researchers especially in the marketing and management information systems disciplines. PLS-SEM is, as the name implies, a more “regression-based” approach that minimizes the residual variances of the endogenous constructs (Hair, Ringle, and Sarstedt, 2011). Compared to CB-SEM, it is more robust with fewer identification issues, works with much smaller as well as much larger samples, and readily incorporates formative as well as reflective constructs. The PLS-SEM algorithm first optimizes measurement model parameters and then, in a second step, estimates the path coefficients in the structural model. Because of its prediction orientation, PLS-SEM is the preferred method when the research objective is theory development and prediction (Hair, Ringle, and Sarstedt, 2011)

6.1. Evaluation of measurement model

Reflective measurement models should be assessed with regard to their reliability and validity. Construct reliability assessment routinely focuses on composite reliability as an estimate of a construct's internal consistency (Hair, et al. 2012). Unlike Cronbach's alpha, composite reliability does not assume that all indicators are equally reliable, making it more suitable for PLS-SEM, which prioritizes indicators according to their reliability during model estimation. Composite reliability should be higher than 0.7 (Hair, Ringle, and Sarstedt, 2011; Hair, et al. 2012). In our case, the composite reliability of the constructs was well above the recommended cutoff of .70 and the range of alpha values was between 0.86 and 0.96 which are above the cutoff value of .70 as shown in table 2.

Likewise, each indicator's reliability needs to be taken into account, whereby each indicator's absolute standardized loading should be higher than 0.70 (Hair, Ringle, and Sarstedt, 2011). We found that all loadings are greater than 0.7 and are significant at 5%. Reflective measurement models' validity assessment focuses on convergent validity and discriminant validity (Hair, Ringle, and Sarstedt, 2011; Henseler, Ringle, and Sinkovics, 2009). For convergent validity, researchers need to examine the average variance extracted (AVE). An AVE value of 0.50 and higher indicates a sufficient degree of convergent validity, meaning that the latent variable explains more than half of its indicators' variance (Hair, Ringle, and Sarstedt, 2011; Henseler, Ringle, and Sinkovics, 2009).

As is seen in Table 2, AVE for each construct is above the expected threshold of 0.5, ensuring convergent validity. For the assessment of discriminant validity, two measures have been put forward: the Fornell Larcker criterion and cross loadings (Hair, Ringle, and Sarstedt, 2011; Henseler, Ringle, and Sinkovics, 2009). The Fornell–Larcker criterion postulates that a latent construct shares more variance with its assigned indicators than with another latent variable in the structural model. In statistical terms, the AVE of each latent construct should be greater than the latent construct's highest squared correlation with any other latent construct. This criterion is verified as shown in table 3 below.

The second criterion of discriminant validity is usually a bit more liberal: an indicator's loading with its associated latent construct should be higher than its loadings with all the remaining constructs (Hair, Ringle, and Sarstedt, 2011). Although the Fornell–Larcker criterion assesses discriminant validity on the construct level, the cross-loadings allow this kind of evaluation on the indicator level. We found also that no indicator has loadings with lower values than their cross loadings (table 4) showing that all the loadings of the measurement items on their assigned latent variables are larger than any other loadings.

In summary, our measurement model satisfies the reliability and validity criteria. Thus, the constructs described above could be used to test the associated hypotheses proposed earlier.

Table 2
Reliability and convergent validity

Construct	Item	Loading	T-value
Behavioral intention of continued use (BI) CA= 0,95 ; CR= 0,97 ; AVE= 0,91	BI1	0,97	82,48
	BI2	0,96	63,97
	BI3	0,93	30,32
Performance expectancy (PE) CA= 0,91 ; CR= 0,95 ; AVE= 0,85	PE1	0,90	28,40
	PE2	0,94	43,35
	PE3	0,92	27,51
Effort expectancy (EE) CA= 0,95; CR= 0,97 ; AVE= 0,91	EE1	0,95	57,57
	EE2	0,95	66,69
	EE3	0,96	78,38
Social influence (SI) CA= 0,86 ; CR= 0,92 ; AVE= 0,78	SI1	0,91	36,89
	SI2	0,89	27,18
	SI3	0,86	16,66

Facilitating conditions (FC) CA= 0,86 ; CR= 0,90 ; AVE= 0,71	FC1	0,87	30,67
	FC2	0,85	17,53
	FC3	0,88	23,67
	FC4	0,74	10,91
Hedonic motivation (HM) CA= 0,90; CR= 0,94; AVE= 0,84	HM1	0,92	40,93
	HM2	0,96	82,51
	HM3	0,86	25,36
Price value (PV) CA= 0,92; CR= 0,95; AVE= 0,87	PV1	0,94	45,87
	PV2	0,95	64,53
	PV3	0,91	34,48
Habit (HT) CA=0,89 ; CR=0,93 ; AVE= 0,82	HT1	0,90	23,77
	HT2	0,93	41,24
	HT3	0,89	18,28
Website design (WD) CA= 0,91 ; CR= 0,94; AVE= 0,85	WD1	0,91	26,55
	WD2	0,95	44,23
	WD3	0,91	39,59
Customer service (CS) CA= 0,89; CR= 0,93; AVE= 0,82	CS1	0,88	29,88
	CS2	0,94	65,20
	CS3	0,90	34,63
Reliability (RE) CA= 0,93; CR= 0,96; AVE= 0,88	RE1	0,93	36,25
	RE2	0,96	70,00
	RE3	0,93	57,49
Security (SE) CA= 0,96; CR= 0,97 ; AVE= 0,93	SE1	0,97	102,24
	SE2	0,97	97,76
	SE3	0,95	58,91

CA: Cronbach Alfa; CR = Composite Reliability; AVE = Average Variance Extracted

Table 3

Correlations and AVEs

	BI	CS	EE	FC	RE	HM	HT	PE	PV	SE	SI	WD
Behavioral intention BI	0,96											
Customer service CS	0,58	0,91										
Effort expectancy EE	0,59	0,56	0,96									
Facilitating conditions FC	0,71	0,59	0,75	0,84								
Reliability RE	0,61	0,65	0,61	0,62	0,94							
Hedonic motivation HM	0,57	0,43	0,54	0,71	0,46	0,92						
Habit HT	0,72	0,49	0,74	0,73	0,59	0,64	0,90					
Performance expectancy PE	0,69	0,48	0,70	0,77	0,49	0,63	0,72	0,92				
Price value PV	0,50	0,42	0,50	0,64	0,41	0,66	0,59	0,62	0,93			
Security SE	0,68	0,66	0,45	0,60	0,62	0,52	0,59	0,42	0,41	0,96		
Social influence SI	0,52	0,41	0,56	0,59	0,36	0,47	0,54	0,55	0,43	0,33	0,88	

Website design WD 0,66 0,66 0,69 0,66 0,71 0,54 0,63 0,53 0,50 0,55 0,46 **0,92**

Diagonal elements represent the square root of the AVE; off-diagonal elements are the inter-construct correlations

Table 4

PLS Cross-loadings

	BI	CS	EE	FC	FI	HM	HT	PE	PV	SE	SI	WD
BI1	0.97	0.56	0.59	0.71	0.57	0.55	0.71	0.69	0.52	0.67	0.52	0.64
BI2	0.96	0.55	0.60	0.70	0.60	0.54	0.74	0.67	0.49	0.68	0.52	0.63
BI3	0.93	0.54	0.50	0.63	0.57	0.54	0.62	0.62	0.44	0.61	0.44	0.63
CS1	0.50	0.88	0.49	0.51	0.47	0.36	0.46	0.43	0.33	0.56	0.37	0.52
CS2	0.59	0.94	0.57	0.60	0.63	0.44	0.48	0.48	0.44	0.65	0.40	0.68
CS3	0.46	0.90	0.43	0.47	0.65	0.37	0.36	0.38	0.36	0.60	0.34	0.57
EE1	0.56	0.48	0.95	0.71	0.51	0.51	0.69	0.69	0.50	0.36	0.54	0.63
EE2	0.58	0.57	0.95	0.73	0.65	0.52	0.71	0.65	0.47	0.51	0.51	0.64
EE3	0.56	0.54	0.96	0.72	0.60	0.51	0.72	0.66	0.47	0.40	0.57	0.70
FC1	0.68	0.49	0.53	0.87	0.51	0.59	0.57	0.67	0.55	0.45	0.50	0.51
FC2	0.54	0.43	0.71	0.85	0.45	0.56	0.67	0.69	0.57	0.44	0.45	0.53
FC3	0.64	0.57	0.75	0.88	0.58	0.61	0.70	0.74	0.51	0.54	0.60	0.60
FC4	0.52	0.48	0.55	0.74	0.53	0.64	0.53	0.46	0.52	0.57	0.39	0.61
FI1	0.56	0.58	0.58	0.61	0.93	0.52	0.61	0.53	0.49	0.59	0.35	0.68
FI2	0.59	0.61	0.59	0.61	0.96	0.39	0.55	0.48	0.38	0.56	0.37	0.66
FI3	0.56	0.63	0.56	0.51	0.93	0.38	0.49	0.38	0.29	0.60	0.29	0.66
HM1	0.55	0.43	0.59	0.77	0.50	0.92	0.67	0.64	0.65	0.53	0.44	0.59
HM2	0.56	0.38	0.49	0.64	0.43	0.96	0.59	0.58	0.57	0.47	0.46	0.51
HM3	0.42	0.36	0.38	0.52	0.32	0.86	0.48	0.48	0.61	0.42	0.39	0.38
HT1	0.68	0.43	0.73	0.74	0.56	0.64	0.90	0.71	0.65	0.57	0.49	0.60
HT2	0.67	0.44	0.65	0.65	0.51	0.58	0.93	0.68	0.51	0.50	0.50	0.56
HT3	0.61	0.45	0.61	0.59	0.52	0.51	0.89	0.55	0.44	0.54	0.48	0.54
PE1	0.60	0.39	0.54	0.72	0.43	0.64	0.62	0.90	0.57	0.41	0.45	0.40
PE2	0.62	0.46	0.66	0.70	0.48	0.58	0.66	0.94	0.62	0.35	0.48	0.53
PE3	0.68	0.46	0.72	0.70	0.45	0.53	0.71	0.92	0.53	0.42	0.60	0.54
PV1	0.46	0.37	0.45	0.63	0.34	0.65	0.55	0.58	0.94	0.39	0.37	0.46
PV2	0.46	0.41	0.46	0.58	0.38	0.59	0.53	0.55	0.95	0.39	0.38	0.46
PV3	0.48	0.39	0.49	0.58	0.42	0.61	0.58	0.60	0.91	0.37	0.44	0.47
SE1	0.62	0.64	0.40	0.53	0.58	0.50	0.54	0.38	0.39	0.97	0.31	0.50
SE2	0.65	0.63	0.47	0.56	0.59	0.50	0.59	0.40	0.36	0.97	0.35	0.55
SE3	0.71	0.65	0.42	0.62	0.62	0.50	0.58	0.44	0.44	0.95	0.30	0.55
SI1	0.43	0.36	0.46	0.51	0.31	0.42	0.47	0.47	0.37	0.29	0.91	0.36
SI2	0.45	0.37	0.47	0.45	0.28	0.39	0.49	0.40	0.34	0.28	0.89	0.38
SI3	0.49	0.36	0.55	0.58	0.36	0.44	0.47	0.59	0.42	0.31	0.86	0.47
WD1	0.54	0.58	0.61	0.58	0.71	0.45	0.54	0.43	0.46	0.49	0.36	0.91
WD2	0.56	0.63	0.67	0.62	0.66	0.52	0.60	0.48	0.53	0.48	0.39	0.95
WD3	0.71	0.61	0.62	0.63	0.60	0.52	0.59	0.55	0.40	0.54	0.49	0.91

6.2. Evaluation of Structural model

The primary evaluation criteria for the structural model are the R^2 measures and the level and significance of the path coefficients (Hair, Ringle, and Sarstedt, 2011). Because the goal of the prediction-oriented PLS-SEM approach is to explain the endogenous latent variables' variance, the key target constructs' level of R^2 should be high. The judgment of what R^2 level is high depends, however, on the specific research discipline. In general, R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can, as a rule of thumb, be described as substantial, moderate, or weak, respectively (Hair, Ringle, and Sarstedt, 2011). The individual path coefficients of the PLS structural model can be interpreted as standardized beta coefficients of ordinary least squares regressions (Hair, Ringle, and Sarstedt, 2011; Henseler, Ringle, and Sinkovics, 2009). Just as with the indicators' weights and loadings, each path coefficient's significance can be assessed by means of a bootstrapping procedure.

For each effect in the path model, one can evaluate the effect size by means of Cohen's (1988) f^2 . The effect size f^2 is calculated as the increase in R^2 relative to the proportion of variance of the endogenous latent variable that remains unexplained (Henseler, Ringle, and Sinkovics, 2009). f^2 values of 0.02, 0.15, and 0.35 signify small, medium, and large effects, respectively (Henseler, Ringle, and Sinkovics, 2009).

Another assessment of the structural model involves the model's capability to predict. The predominant measure of predictive relevance is the Stone-Geisser's Q^2 which postulates that the model must be able to adequately predict each endogenous latent construct's indicators (Hair, Ringle, and Sarstedt, 2011; Hair, et al. 2012). The Q^2 value is obtained by using a blindfolding procedure. If an endogenous construct's cross-validated redundancy measure value for a certain endogenous latent variable is larger than zero, its explanatory latent constructs exhibit predictive relevance (Hair, Ringle, and Sarstedt, 2011; Hair, et al. 2012). In 2005, a global fit measure for PLS path modeling has been suggested (Tenenhaus et al. 2005). GoF ($0 < GoF < 1$), defined as the geometric mean of the average communality and average R^2 (for endogenous constructs). According to Wetzels, Dekerken-Schröder and Van Oppen (2009), GoF values of 0.1, 0.25, and 0.36 signify small, medium, and large effects, respectively.

Table 5

Assessment of structural model

Dependent variable	UTAUT	UTAUT2	UTAUT2+SQ
Behavioral intention of continued use			
Performance expectancy	0.31*	0.22	0.34**
Effort expectancy	0.01	- 0.13	- 0.20
Social influence	0.10	0.08	0.10
Facilitating conditions	0.41**	0.33**	0.12
Hedonic motivation		- 0.00	- 0.07
Price value		- 0.06	- 0.06
Habit		0.41**	0.22*
Website design			0.25*
Customer service			- 0.03
Reliability			0.02
Security			0.32*
R^2	0.57	0.62	0.73
f^2	-	0.08 ⁺	0.22 ⁺
GoF	0.69	0.72	0.79
Q^2	0.49	0.50	0.56

**Parameter is significant at $p < 0.01$; *Parameter is significant at $p < 0.05$; all other path coefficients are insignificant.

+ : Compared with UTAUT model

As shown in table 5, the models tested were UTAUT, UTAUT2, and UTUAT2 with Service Quality factors (UTAUT2+SQ). The variance explained by these three models (R^2) are respectively 0.57, 0.62, and 0.73, which exceed the cut-off value of 0.25. The R^2 of (UTAUT2+SQ) is considered as substantial. The effect size f^2 relative to the UTAUT2 model compared to UTAUT is 0.08, which is instead a small effect. On the other hand, The effect size f^2 of (UTAUT2+SQ) model compared to UTAUT is 0.16, which represents a medium effect. All three models have Q^2 values larger than zero which demonstrate their predictive relevance. In addition, for the three models (see Table 5), we obtained *GoF* values which exceeds the cut-off value of 0.36 for large effect sizes that allows us to conclude that all the models perform well. However, UTAUT2+SQ model has the highest values of R^2 , *GoF*, and Q^2 . This demonstrate that when we add service quality factors to UTAUT2 model, we obtain an increase in the variance explained, and an improvement of the predictive power. So, our model that integrates service quality factors to UTAUT2 explains the intention of continued use of Internet banking better than all others.

The rest of the analysis and discussion will be focused on the (UTUAT2+SQ) model. We calculate t-statistics derived from bootstrapping (300 iterations with individual change procedure). Path coefficients are presented in table 5. We found that the factors which have positive effects on the intention of continued use of Internet banking are performance expectancy ($\beta = 0.34$; $p < 0.001$), security ($\beta = 0.32$; $p < 0.05$); web site design ($\beta = 0.25$; $p < 0.05$), and habit ($\beta = 0.22$; $p < 0.05$).

7. Discussion

7.1. Theoretical implications

Theoretically, our results suggests that adding service quality factors increase the predictive power of the UTAUT2 model in explaining the intention of use of Internet baking. While the UTAUT basic model explains 57% of the variance of behavior intention, The UTAUT2+SQ model explains 73% of the variance which represent an important increase of explanatory power compared to the UTAUT model ($\Delta R^2 = 16\%$; $f^2 = 0.22$). In addition the R^2 of our model

($R^2 = 0.73$) is higher than the R^2 of the UTAUT2 model ($R^2 = 0.62$) proposed by Venkatesh, Thong, and Xu, 2012 ($\Delta R^2 = 11\%$; $f^2 = 0.15$), suggesting that the inclusion of service quality model improve significantly our understanding about the determinants of use of the Internet banking. Compared with other research exploring Internet banking adoption, our study has a higher predictive power than similar studies. For instance, Pikkariainen et al. (2004) used TAM and explained 12.4% of intention, using perceived usefulness and information on the website as determinants. Recently, Martins, Oliveira, and Popović (2014) develop a conceptual model that combines unified theory of acceptance and use of technology (UTAUT) with perceived risk factors. Their model explain 60% of the intention of Internet banking adoption.

Table 5 presents the result of our hypotheses tested. It reveals that performance expectancy is the most significant determinant ($\beta = 0.34$; $p < 0.001$). In fact, Internet banking is perceived as a useful technology which provide many benefits to consumers in performing their banking activities. This finding is consistent with the results of prior studies (Riffai, Grant, and Edgar, 2012; Martins, Oliveira, and Popović, 2014). On the other hand, and contrary to our expectations, the effect of effort expectancy, social influence, and facilitating condition are not significant. Other studies found that social influence and effort expectancy are not important, especially in a voluntary context such as Internet banking (Riffai, Grant, and Edgar, 2012; Martins, Oliveira, and Popović, 2014). This means that customers will not use the electronic services of their banks because their friends recommend these services or because it is easy to use electronic banking technology. Customers are more concerned by the performance expected and individuals care more about the outcomes of Internet banking.

Concerning "facilitating conditions", this factor is remaining significant in both UTAUT and UTAUT2 models (see table 5). But with the inclusion of the service quality factors, effort expectancy became not significant. This means that the effect of this element decreased when we integrate "web site design" and "security" factors. The first factor represents the capability of the website to provide in-depth information about e-services and allows customer to complete a variety of transactions quickly and easily. The security factor reflects the ability of the web site to ensure privacy and to protect sensitive information by offering adequate security features and procedures. Past studies

outlined the importance of web site design and security as significant antecedents of Internet banking adoption and use (Gupta, and Bansal, 2012, Herington, and Weaven, 2009, Sohail, and Shaikh, 2008).

7.2. Managerial implications

The findings of this research show that the users of electronic services are primarily a goal oriented customer than browsers. They are seeking mainly the benefits offered by the use of Internet banking, and are more concerned about the expected performance. Thus, managers should concentrate on this issue and their preoccupations should be turned to develop the capacity of the bank's web site to provide more suitable services and features in order to improve the productivity of the users.

In addition, the results of this study reveal that service quality model improve our knowledge about the end-user intention to use Internet banking. Nevertheless, the quality factors have different impact on predicting the continued use of electronic services. In this research, we found that "web site design" and "security" are the most important quality factors in determining the intention of continued use. On the other hand, "customer service" and "reliability" seem to have no effect. This is probably, due to the inclusion the "Habit" construct. In fact, the familiarized users of Internet banking know already the willingness and readiness of their banks to respond to their needs (inquires answered, problem solving...) and have tested also the web site reliability (delivering the right service within the time frame promised). So, in the case of continued use of Internet banking, the experienced customers are less concerned about customer service or reliability, they are more interested about the web design and the security features more than any other factors. So, managers in the banks should be more attentive to these factors and they have to furnish the necessary resources in order to develop the website design and security characteristics such as navigation, information search, transaction processing, appropriate personalization, security of payments and privacy of shared information.

8. Conclusion

Our research aimed to understand the determinants of the continued use of Internet banking by combining for the first time the two models: UTAUT2 and Service Quality. UTAUT2 model is chosen to take into account the particularity of the customer use context in explaining the acceptance and use of the technology, and Service Quality model is added to UTUAT2 to take into consideration the quality factors related to the electronic services delivered by the banks. We found that the proposed model in this study has a stronger explanatory power than the original UTAUT model and the extended UTAUT2 model. The findings reveal that performance expectancy, habit, website design, and security are significant determinants of the intention to continue using electronic services of the banks in the future. By including service quality model in our proposed framework, we provide more predictive power to existing UTUAT and UTAUT2 models.

While this study enhance our knowledge about the acceptance and use of the technology in the domain of Internet banking, some improvements can be taken in the future. For example, further research may examine the effect of moderate variables such age, gender, education level or Internet experience. The intention of continued use of electronic services can vary according to these factors. In addition, this study is the first one, to our knowledge, which integrate UTAUT2 model and Service Quality model. Future studies are appealed to test the model proposed here in other contexts (other countries and/or other technologies) to verify its robustness. Finally, further studies can integrate other factors or other models which can be suitable to enrich this one proposed here.

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THE IMPACT OF ORGANIZATIONAL CULTURE ON INNOVATION ACTIVITIES - THE CASE OF X CORPORATION IN VIETNAM

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ABSTRACT

Organizational culture is a considerable issue that has great impact on innovation whereas innovation is widely regarded as a critical source for growing and developing of each corporation. A theoretical framework is empirically tested identifying the impact of organizational culture on innovation activities. The objective of this paper is examining the influence of strategy, purposefulness, trust relationship, behaviors that encourage innovation, working environment, customer orientation, management support and leadership on different aspects of innovation activities, including product, process, marketing, and organizational innovation based on an empirically research of 124 employees at X Corporation. The results reveal the positive effects of organizational culture on innovation activities at X Corporation. In addition, based on these findings, some suggestions are given for X Corporation to further develop their own organizational culture and innovation activities. Moreover, the results of this research are expanded to be the references for similar companies as X Corporation or other further researches related to innovation topics..

Key-words: Organizational culture; strategy; purposefulness; management support; leadership; innovation activities.

1. INTRODUCTION

During 30 years of renovation since 1986, Vietnam has been through significant changes in many aspects of life such as politics, economy, society, etc. Since joining into the World Trade Organization (WTO) in 2006, the Vietnamese economy was faced with a variety of opportunities and challenges. In order to take advantage of these opportunities and overcome challenges, innovation is one of undeniable issues that each company should focus on to improve their output and performance. Innovation, including product, process, marketing, and organizational innovation within a firm, is considered one of the essential components for survival and growth for each corporation. Besides, organizational culture is an aspect that appears in each internal company in order to enhance the work performance and create environment for innovation activities. As the result, investigating the linkage between organizational culture and innovation activities should receive more concern from both enterprises and scientists in Vietnam. The main purpose of the research is to identify the influence of organizational culture on innovation activities. More specifically, this paper analyzes the influence of the eight components of organizational culture on innovation activities and then provides the recommendations and implications for academics and practitioners based on the analyses.

2. LITERATURE REVIEW

2.1. Organizational culture

According to French (1990), organizational culture is defined as: values, beliefs, assumptions, myths, norms and goals that are widely accepted in organizations. Rabinson (1988) describes the organizational culture is a set of important assumptions that members jointly accepted. Any organization or group has its own culture. Organizational culture is like a personality that gives a mean to it and is the main axis in guiding people to carry out their activities. As behaviors are influenced by their personality; assumptions shared by members of the organization are a set of behavioral patterns, ideas and activities in organization. Janićijević (2011) defined organizational culture in his work

as a scheme of assumptions, values, norms, and attitudes, manifested through symbols which the members in an organization have developed and adopted through mutual experience and which help them determine the meaning of the world around them and how to behave in it. The current study is based on the definition of Schein (2004) because of its adequacy and comprehensiveness for this research, as “a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.”

In this study, organizational culture consists of eight dimensions: (1) Strategy; (2) Purposefulness; (3) Trust relationship; (4) Behavior that encourage innovation; (5) Working environment; (6) Customer orientation; (7) Management support; (8) Leadership. These dimensions are adapted and modified from previous studies to be more comprehensive. Martin (2000) identified and synthesized dimensions of organizational culture, including: strategy, purposefulness, trust relationship, behavior that encourages innovations, working environment, customer orientation, and management support that influence creativity and innovation (see more detail in Table 1). In addition, according to Auernhammer et al. (2013), the characteristics of organizational culture included 13 variables which are similar to some aspects of Martin model, specifically in 4 components: organization values the trust, open to change, free communication, and shared values. However, Auernhammer et al. (2013) focused on leadership of organizational culture, which Martin had not mentioned in the previous model. This research based on the Martin model and Auernhammer et al. research to analyze totally eight dimensions of organizational culture, which are: strategy, purposefulness, trust relationship, behavior that encourages innovations, working environment, customer orientation, management support, and leadership.

Strategy	<ul style="list-style-type: none"> - Customer focused marketing - Integration of core values - Reaction on change - Knowledge of management with future perspective
Purposefulness	<ul style="list-style-type: none"> - Understanding of vision, mission, goals and objectives - Involvement Availability of standards
Trust relationship	<ul style="list-style-type: none"> - Trust - Support for change
Behavior that encourages innovation	<ul style="list-style-type: none"> - Idea generating - Risk taking - Decision making
Working environment	<ul style="list-style-type: none"> - Integration of goals and objectives - Conflict handling - Cooperative - Participation - Control of own work - Developing better work methods
Customer orientation	<ul style="list-style-type: none"> - Flexibility in customer service - Improvement of service - Understand of customer needs
Management support	<ul style="list-style-type: none"> - Open communication - Availability of equipment and resources - Tolerance of mistakes - Adaption of rules and regulations

TABLE 1 - Dimensions of organizational culture - Source: Martin (2000:23)

2.2. Innovation

Innovation is widely regarded as a critical source of competitive advantage in an increasingly changing environment (Dess and Picken, 2000; Tushman and O’Reilly, 1996). According to management scholars, innovation capability is the most important determinant of firm performance (Mone et al., 1998). One of the primary definitions of innovation was coined by Schumpeter in the late 1920s. According to Schumpeter, innovation is reflected in novel outputs: a new good or a new quality of a good; a new method of production; a new market; a new source of supply;

or a new organizational structure, which can be summarized as ‘doing things differently’. Rogers (1995) defines innovation as an ‘idea, practice or object that is perceived to be new by an individual or other unit of adoption’.

In this research, OECD Oslo Manual (2005), which is the primary international standard for defining and assessing innovation activities, has been chosen to describe innovations at firm level as “implementation of a new or significantly improved product (good or service), process, a new marketing technique or a new organizational method in business practices, workplace organization or external relations”. The current study is based on the classification of four types of innovation described in the OECD Oslo Manual (2005) as product, process, organization and marketing innovations. A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. A process innovation is the implementation of a new or significantly improved production or delivery method. A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Organizational innovation: An organizational innovation is the implementation of a new organizational method in the firm’s business practices, firm organization or external relations.

2.3. Relationship between organizational culture and Innovation

There seems to be little agreement in the conceptual studies as to what type of organizational culture will promote creativity and innovation (Judge et al., 1997). Nevertheless, various researchers have proved the positive relationship between organizational culture and innovation. Tushman and O’Reilly (1997) point out that successful organizations have the capacity to absorb innovation into the organizational culture and management processes and that organizational culture lies at the heart of organizational innovation. Kenny and Reedy (2007) explain that organizational culture affects the extent to which creative solutions are encouraged, supported and implemented. Martin and Terblanche (2003) emphasize that a culture supportive of creativity encourages innovative ways of representing problems and finding solutions. From these researches, it can be concluded that organizational culture and innovation have a relationship in which organizational culture is an antecedent as well as an important factor for innovation. More specifically, an analytical framework of the relationship in this study can be hypothesized in the following figure.

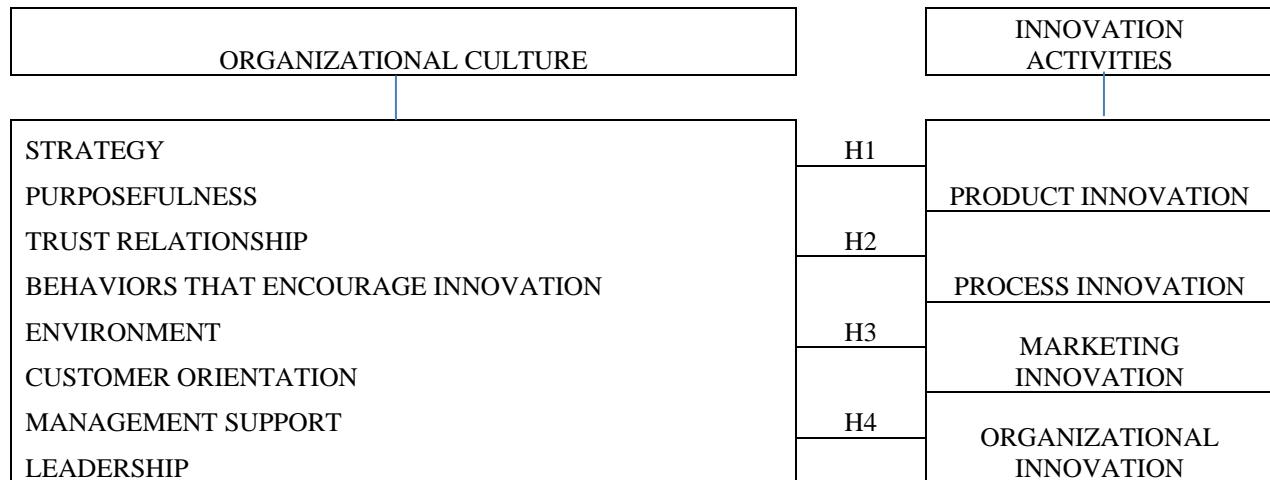


Figure 1 : Analytical framework

Hypothesis 1: There is a positive relationship between organizational culture and product innovation

Hypothesis 2: There is a positive relationship between organizational culture and process innovation

Hypothesis 3: There is a positive relationship between organizational culture and marketing innovation

Hypothesis 4: There is a positive relationship between organizational culture and organizational innovation

In each hypothesis, this paper examines the impact on 8 types of organizational culture, including: strategy, purposefulness, trust relationship, behavior that encourages innovations, working environment, customer orientation, management support and leadership, respectively, on innovation activity.

3. RESEARCH METHODOLOGY

In terms of respondents, this paper focuses on the case study of X Corporation's employees. X Corporation was established on November 6th, 2002. The head office is located in Hanoi and there are two other branches in Da Nang and Ho Chi Minh City. X Corporation has become a leading manufacturing company in technology by introducing a large number of high technology, good quality, and guaranteed products for Vietnam for 12 years of development. In addition to the domestic market, X Corporation has plans to expand its branches to Southeast Asia, in countries such as Laos, Cambodia, Myanmar, Philippines, Thailand, Indonesia, and to the international market.

The functions of X Corporation are as follows: Producing and providing laboratory equipment for building inspection; Producing and providing vocational education equipment: electrical technology, electronics, automotive mechanics, mechanical engineering, etc.; Producing and providing broadcasting equipment, wireless FM radio devices; Producing and providing LED devices, LED billboards; Producing and providing electrical equipment, UPS, Batteries specialized; Producing and providing scientific, biochemistry, health and environment measurement devices; Producing and providing heavy industrial equipment: Mechanic, Mechanical construction, mining, and hydroelectric equipment; Producing and providing electronics, information technology, telecommunications devices and camera.

There are four dimensions of innovation that are developed by Gunday (2011): product innovation, process innovation, marketing innovation, organizational innovation. Product innovation scales includes 5 items, process innovation is also composed of 5 items, and similarly, marketing innovation scales consists of 5 items, organizational innovation includes 9 items. Each item in their scale is asked to indicate the extent to which every respondent agrees with statements. Measurement of constructs is based on a 5-point rating Likert scale which corresponds to 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, 5 = strongly agree. Within 150 sending surveys from March 3rd 2014 to 28th March 14th 2014, 129 answer sheets were completed and returned to researchers. Out of which we found 124 ones being suitable for the research.

4. ANALYSIS RESULTS

4.1 Reliability analysis

Cronbach's alpha is a common measure of internal consistency (reliability) of a test or scale. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inner-relatedness of the items within the test (Tavakol *et al.*, 2011). According to George & Maller, (2003), an acceptable reliability score should be 0.7 or higher. Nevertheless, lower thresholds are sometimes used in the literature (Reynaldo *et al.*, 1999). In this research, scales which have Cronbach's alpha coefficient greater than or equal to 0.6 will be accepted. Through reliability analysis in below table, all items of 8 dimensions of organizational culture and 4 types of innovation activities are accepted. Therefore, they are brought forward in the exploratory factor analysis.

Scale	Cronbach's Alpha
STRATEGY	0.834
PURPOSE	0.862
TRUST	0.874
BEHAVIOR	0.884
ENVIROMENT	0.898

CUSTOMER	0.793
SUPPORT	0.870
LEADERSHIP	0.840
PRODUCT	0.648
PROCESS	0.853
MARKETING	0.793
ORGANIZATION	0.813

Table 2 - Reliability analysis results

4.2 Exploratory factor analysis

Exploratory factor analysis is a statistical technique which is used for data reduction and summarization. The primary objectives of an exploratory factor analysis are to determine (1) the number of common factors influencing a set of measures; (2) the strength of the relationship between each factor and each observed measure (DeCoster, 1998). Initially, it is necessary to test the sampling adequacy of factor analysis based on Kaiser-Meyer-Olkin (KMO) Measure. In case of KMO with a value between 0.5 and 1.0 and Sig. is smaller than 0.5, factor analysis is more appropriate. In case of KMO with a value smaller than 0.5 or Sig. is greater than 0.5, it indicates that factor analysis may not be appropriate. In KMO and Bartlett's Test, KMO value of each scale is higher than 0.05 with Sig. is 0.000 (Table 3). Therefore, the validity of data for exploratory factor analysis is confirmed.

Scale	KMO Measure of Sampling Adequacy
Organizational Culture	0.731
Product Innovation	0.682
Process Innovation	0.844
Marketing Innovation	0.816
Organizational Innovation	0.729

Table 3 - Exploratory factor analysis results

The organizational culture scale comprises 37 variables. After making reliability analysis, all items are reliable, none will be rejected. Therefore, organizational culture practices scale still has 37 observed variables with internal consistency. Exploratory factor analysis is conducted with these 37 variables to measure convergence of variables along with components, extracted into 8 components, namely ENVIRONMENT, BEHAVIOR, SUPPORT, LEADERSHIP, STRATEGY, PURPOSE, CUSTOMER, and TRUST. The product innovation scale includes 5 observed variables, extracted to 1 component – PRODUCT; the process innovation scale includes 5 observed variables, extracted to 1 component – PROCESS; the marketing innovation scale includes 5 observed variables, extracted to 1 component – MARKETING; and the organizational innovation scale includes 8 observed variables, extracted to 1 component – ORGANIZATION

4.3 Regression analysis

Regression analysis is a modeling technique for analyzing the relationship between a real-valued dependent variable Y and one or more independent variables $X_1, X_2, X_3, \dots, X_k$ (Ragsdale, 2007). The goal in regression analysis is to identify a function that describes the relationship between these variables as closely as possible so that we can assess the impact of each independent variable on dependent variable as well as predict the change in dependent variable when there is any change in independent variables. Initially, the mean score of four dependent variables (PRODUCT, PROCESS, MARKETING, and ORGANIZATION) and eight independent variables (STRATEGY, PURPOSE, TRUST, BEHAVIOR, ENVIRONMENT, CUSTOMER, SUPPORT, LEADERSHIP) for 124 employees are calculated to ensure that data satisfies our assumptions for regression analysis.

Dependent variables: Product Innovation, Process Innovation, Marketing Innovation, Organizational Innovation								
Independent variables:	Beta Coefficients and Sig. for Model 1-4							
	Model 1		Model 2		Model 3		Model 4	
	B	Sig	B	Sig	B	Sig	B	Sig
STRATEGY	0.083	0.031	0.296	0.000	0.363	0.000	0.184	0.000
PURPOSE	0.051	0.181	0.036	0.497	0.125	0.076	0.022	0.583
TRUST	0.001	0.984	-0.046	0.268	-0.012	0.858	-0.005	0.870
BEHAVIOR	-0.010	0.774	-0.021	0.642	-0.018	0.794	0.030	0.395
ENVIROMENT	0.124	0.000	0.189	0.000	0.261	0.000	0.111	0.001
CUSTOMER	0.155	0.001	0.136	0.027	0.243	0.001	0.121	0.010
SUPPORT	0.223	0.000	0.262	0.000	0.236	0.001	0.182	0.000
LEADERSHIP	0.198	0.000	0.117	0.041	0.145	0.045	0.117	0.008
R2	0.567		0.546		0.492		0.508	
Adjusted R2	0.537		0.514		0.456		0.474	
F	18.836		17.259		13.914		14.832	

Table 4 : Regression analysis results

Eight dimensions of organizational culture were included in the analysis as independent variables. In the first model (Model 1), eight dimensions of organizational culture explained 56.7% of the variance in product innovation. In the next three models (Model 2,3,4), eight dimensions of organizational culture jointly explained 54.6%, 49.2%, 50.8% of the variance in process innovation, marketing innovation, and organizational innovation, respectively. As results of the analysis, it is found that 5 dimensions of organizational culture (STRATEGY, ENVIRONMENT, CUSTOMER, SUPPORT, and LEADERSHIP) have a positive and significant effect on four types of innovation activities. Therefore, according to the findings of the hierarchical regression analysis, five detailed hypotheses related to STRATEGY, ENVIRONMENT, CUSTOMER, SUPPORT, and LEADERSHIP of H1, H2, H3, H4 model are accepted, which means those 5 dimensions of organizational culture have significant impact on innovation activities; and 3 other detail hypotheses related to PUPPOSE, TRUST, BEHAVIOR of H1, H2, H3, H4 model are rejected for this research, which means those 3 dimensions do not have statistical relationship with innovation activities.

5. FINDINGS AND IMPLICATIONS

This paper focuses on the effects of organizational culture on innovation activities at X Corporation. After data analysis by quantitative methodologies of reliability, exploratory factor analysis and regression analysis for 124 observers, by using SPSS 22, the result of this study illustrates that five dimensions of organizational culture: management support, strategy, working environment, customer orientation, and leadership have a positive influence on innovation activities. Three remaining factors including purposefulness, trust relationship, and behavior that encourage innovation do not show statistically reliable relationship with any type of innovation activities.

This study makes/intends to make a contribution for both academics and company’s practices. Firstly, for academics, as provided in the literature review, there are various number of studies related to the topic of organizational culture and innovation activities, most of them illustrate the great impacts of organizational culture on innovation activities. By applying and modifying Martin (2000) model, this research demonstrates the positive relationship between dimensions of organizational culture, including management support, strategic vision and mission, working environment, customer orientation, and leadership, to product innovation, process innovation, marketing innovation, and organizational innovation. Therefore, the empirical evidence will be added for future literature review. Secondly, for company’s practices, this research provides the initial model applying for X Corporation, and more widely, this topic may be also used for the similar companies in the same industry. Therefore, X Corporation and other

companies in the same industry should be encouraged and concentrated on developing those first dimensions to have better product innovation, process innovation, marketing innovation, and organizational innovation results. In order to improve organizational culture at X Corporation, suggestions are given in five dimensions: management support, strategic vision and mission, working environment, customer orientation, and leadership.

Firstly, management support is one of significant factor improving the influence on innovation, especially product innovation and organizational innovation. This research suggests that X Corporation should develop teambuilding or outside activities, organize some training courses to all departments, establish more special reward and recognition by promotion or incentive; improve the availability for equipment and internet technology to enhance innovation activities. Secondly, strategic vision and mission is one of main factors that improve innovation activities, especially for the process and marketing innovation. In order to improve strategy implementation, X Corporation should train new employees in the company's vision, missions and core values.

Thirdly, besides strategy, and management support the working environment is an undeniable factor that influences innovation activities because it focuses on employees in the organization. According to the research results, this research suggests that X Corporation should establish a creative space or Talent incubator, and improve conflict solving to enhance innovation activities. Fourthly, according to the research results, customer orientation comes fourth in contributing product, process and marketing innovation. However, it is one of the important factors fostering innovation. Therefore, X Corporation should pay more attention to customer caring such as: deeply understand the customers' needs in order to enhance innovation. X Corporation should establish a customer department and hotline telephone to easily solve customer problems. Fifthly, leadership plays an important role not only in innovation activities but also in company management. To develop leadership ability, X Corporation manager should encourage employees to not hesitate to share their innovation ideas, and it should reward and recognize meaningful ideas; promote staffs who have the most valuable ideas. Moreover, leaders should balance time between working and thinking, and not be strict and spend time to share company values and interact with their subordinates.

In terms of limitations of research, its scope is small, as it was conducted in a corporation in Hanoi with small data collection (124 respondents), therefore the analysis results is not highly generated. Therefore, future studies should be conducted in larger scale like industry or regions with various types of components. Moreover, future studies should broaden the topic related to the impact of organizational culture on innovation activities as well as impact of innovation activities on innovative performance

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UNDERSTANDING THE BRAND PERSONALITY THROUGH ITS ANTECEDENTS

COMPRENDRE LA PERSONNALITE DE LA MARQUE A TRAVERS SES ANTECEDENTS

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ABSTRACT

Brands are perceived to possess a personality. Despite developments made in this area, the focus has been solely on its antecedents. This article aims to present a statement of research on variables that can influence the brand personality. This paper summarizes the results obtained by researchers and highlights the directions for future research.

Key-words: brand personality, antecedents of brand personality

RÉSUMÉ

Les travaux sur la personnalité de la marque ont accordé relativement peu d'attention à l'examen de ses antécédents. Cet article a pour but de présenter un état des recherches sur les variables capables d'influencer la personnalité de la marque. Il résume l'ensemble des résultats obtenus par les chercheurs et souligne les différentes voies de recherches qu'il reste à explorer.

Mots clés : personnalité de la marque ; antécédents de la personnalité de la marque.

1. INTRODUCTION

Depuis un certain nombre d'années, maintes recherches s'intéressant aux marques ont identifiés de nombreux concepts toujours plus forts et plus intenses pour appréhender les relations existantes entre les marques et les consommateurs. Cet intérêt académique revient au fait que les marchés évoluent dans un environnement turbulent caractérisé par des consommateurs de plus en plus exigeants, une concurrence aussi rude qu'acharnée, des progrès technologiques spectaculaires. Cependant, les marques se trouvent aujourd'hui confrontées à un nouveau défi, à des nouvelles questions face à l'émergence d'un nouveau concept « *la personnalité de la marque* ». Ainsi, au même titre que tout individu dispose d'une personnalité qui lui est propre, la marque peut également être appréhendée à partir de traits spécifiques qui participent à sa définition et à son identité. En dépit d'une pertinence théorique et managériale évidente, la recherche sur la personnalité de la marque comporte encore plusieurs zones d'ombre notamment en termes de ses antécédents. C'est dans ce cadre de réflexion s'inscrit notre recherche dont l'objectif est de les appréhender.

2. LA LITTÉRATURE SUR LA PERSONNALITE DE LA MARQUE

2.1 Son emprunt...

Le concept de personnalité de la marque a été largement débattu depuis la contribution importante de Aaker (1997). La multiplication des études réalisées sur le sujet en témoigne. En effet, la majorité des chercheurs confirment que ce concept s'inspire de l'étude des traits de la personnalité humaine entreprise depuis plusieurs décennies en psychologie. En ce sens, Ferrandi et Valette-Florence (2002) notent que « *l'étude de la personnalité des marques est issue d'approches psychologiques dont le but est de mesurer la personnalité humaine* ». Si différents courants de recherche se sont intéressés à ce concept, le courant dominant correspond à la structuration de la personnalité à partir de traits. La personnalité d'un individu est ainsi composée de traits qui sont regroupés autour de facteurs dont la

meilleure représentation est celle du « modèle des cinq grands facteurs », communément appelés le modèle «O.C.E.A.N» (d'après les initiales des facteurs) : Ouverture, caractère Conscientieux, Extraversion, Amabilité et Neurotisme. C'est le modèle de référence en la matière (Bouhlef et al, 2011).

2.2 Sa définition...

Comme le souligne Gouteron (2006), le consommateur n'éprouve aucune difficulté à assigner une personnalité à des marques, à penser aux marques comme si elles étaient des personnages humains. En effet, les théories de l'animisme soulignent que les hommes ont un besoin d'anthropomorphiser les objets afin de faciliter leurs interactions avec le monde immatériel. La percée la plus remarquable dans le domaine de la recherche sur la personnalité de la marque a été l'acceptation générale de la définition de la chercheuse américaine Aaker J.L (1997) qui définit ce concept comme « *l'ensemble des caractéristiques humaines associées à une marque* ». Si cette définition semble acceptée dans la majorité des travaux qui ont suivi ceux de Aaker, pour certains, elle fait de la personnalité de la marque un concept fourre-tout (Azoulay et Kapferer, 2003). Ces derniers suggèrent une définition très proche, c'est « *l'ensemble des traits de personnalité humaine qui sont à la fois applicables et pertinents pour les marques* ». Ambroise et Valette-Florence (2010) proposent ainsi la définition suivante « *l'ensemble des caractéristiques singulières et distinctives de la marque, ainsi qu'aux valeurs qu'elle véhicule ; elle devient en quelque sorte le cœur de la signification de la marque* ».

2.3 Sa mesure ...

La principale difficulté posée par le concept a longtemps été liée à sa mesure. Il faut attendre la fin des années 1990 pour qu'une échelle de mesure de personnalité spécifiquement adaptée à la marque et remplissant les conditions de fiabilité et de validité voit le jour. En effet, la recherche de Aaker (1997) constitue, à cet égard, une exception et une contribution majeure. Ses résultats valident une structure de 42 traits répartis en cinq dimensions à savoir :

- **Sincérité** : réaliste, familiale, provinciale, honnête, sincère, concrète, saine, authentique, gaie, sentimentale, amicale.
- **Excitation** : audacieuse, dans le vent, excitante, fouguese, calme, jeune, imaginative, unique, moderne, indépendante, contemporaine.
- **Compétence** : fiable, travailleuse, sûre, intelligente, technique, organisée, gagnante, leader, sûre d'elle.
- **Sophistication** : distinguée, séduisante, belle, envoûtante, féminine, douce.
- **Rudesse** : masculine, virile, robuste, rude, qui vit au grand air.

3. LA LITTÉRATURE SUR LES ANTÉCÉDENTS DE LA PERSONNALITÉ DE LA MARQUE

Les recherches sur les antécédents de la personnalité de la marque n'ont pas fait l'objet d'une grande attention, il en est d'ailleurs de même sur ses conséquences. Pourtant, selon Ferrandi et Valette-Florence (2002), « *le premier axe de travail doit porter sur les antécédents de la personnalité des marques* ». Wysong, Munch et Kleiser (2002) suggèrent que « *pour mieux comprendre le processus de formation de la personnalité de la marque, les chercheurs doivent explorer ses antécédents et ses conséquences* ». Globalement les études antérieures ont permis d'identifier plusieurs variables capables d'influencer la personnalité de la marque. A notre connaissance, aucune recherche n'a encore intégré ces variables dans un seul modèle. C'est cette raison qui nous a poussé à limiter notre attention à l'étude des antécédents de la personnalité des marques. Amanpreet et Himani (2012) signalent que toute forme d'expression de la marque contribue à la construction de sa personnalité. Ainsi, il est alors possible d'imaginer que toutes les actions marketing sont perçues, analysées et intégrées par les consommateurs comme des comportements et des traits de caractère d'une véritable personne, en l'occurrence la marque.

Plusieurs chercheurs ; dont Aaker (1997), Lee et Cho (2009) ainsi que Mishra et Pradhan (2011) ; affirment que les traits de personnalité d'un individu sont créés et communiqués au travers de ses attitudes, son comportement ou ses caractéristiques physiques. La perception des traits de personnalité est inférée par le contact direct ou indirect qu'a le consommateur avec la marque. C'est dans ce sens, Pantin-Sohier et Brée (2004) affirment que « *les perceptions des traits de personnalité de la marque peuvent être influencées par toutes les expériences directes ou indirectes que le consommateur entretient avec la marque* ». En résumé, ces deux auteurs recensent les variables les plus fréquemment utilisées à savoir : « *les illustrations publicitaires, la mise en page de la publicité, les médias publicitaires, le style de la publicité, le texte de la publicité, le ton de la publicité, l'âge de la marque, le nom de marque, les symboles et logos, les techniques photographiques, le casting, les célébrités, l'identification du dirigeant, les couleurs, les associations à la firme, l'image de la firme, le pays d'origine, les symboles culturels, les canaux de distribution, les émotions et sentiments évoqués, la musique, le packaging, le prix, les attributs du produit, les éléments constitutifs du produit, les bénéfiques produits, la catégorie de produit, les caractéristiques du*

produit, la forme du produit, le nom du produit, les localisations en magasins, la promotion des ventes, la typographie, l'image de l'utilisation et l'image de l'utilisateur ». Toutefois notre objectif étant d'élaborer un modèle intégrateur identifiant les antécédents de la personnalité de la marque, nous avons choisi de classer ces variables, à l'instar de Wysong *et alii* (2002), en trois catégories, à savoir celles se rapportant à la structure de l'organisation, celles tenant à la politique du produit et celles relatives à la politique de communication. Certes, le modèle proposé ne peut être exhaustif et contenir l'ensemble des variables.

3.1 Les variables structurelles...

Les variables structurelles font référence aux caractéristiques relatives à la structure de l'organisation, nous identifions :

3.1.1 Le statut de la marque : Les marques se différencient par leur nature mais également par leur statut c'est-à-dire par leur positionnement sur le marché qui les distingue les unes des autres. Kotler distingue quatre grands statuts des marques : celui de leader, celui de challenger, celui de suiveur et celui de spécialiste. Quand elle acquiert le statut de leader, la marque est considérée comme la référence avec une part de marché très supérieure à celle de la concurrence (par exemple L'Oréal, Nestlé, Pampers). Elle souvent attaquée, copiée ou imitée. Quand elle a un statut de challenger, la marque défie le leader et tente de le dépasser ce qui implique la nécessité d'innover constamment et d'être dynamique. Apple adopte, par exemple, la stratégie de challenger sur le marché de la micro-informatique devant les leaders IBM et Compaq. Dans un statut de suiveur, la marque n'essaie pas de rivaliser avec le leader ou le challenger mais se contente de suivre leur évolution et de copier leurs innovations. Enfin en tant que marque de niche, la marque de spécialiste cible un public très restreint pour faire connaître ses produits. Elle est perçue comme très innovante mais sur une cible restreinte.

3.1.2 L'innovation : Il est déjà connu depuis longtemps qu'une marque qui ne se renouvelle pas est une marque qui vieillit, qui perd sa valeur ajoutée, son avantage différentiel, sa raison d'être. C'est sa seule planche de survie. Bhat et Bowonder (2001) signalent que l'innovation permet de renforcer la personnalité de la marque et fournit à cette marque tout son dynamisme. Selon Léhu (2003), une marque sera considérée comme « vieille » lorsqu'elle est « brutalement ou progressivement délaissée par les consommateurs, sous prétexte qu'elle est perçue comme dépassée, d'un autre temps, sans lien avec leurs besoins actuels ». Au contraire, une marque est « ancienne » lorsque « son âge chronologique est important ou en tout cas plus important que l'âge moyen des autres marques présentes sur son marché ». L'auteur signale également qu'« une marque ancienne peut être perçue comme étant une marque jeune, parce qu'elle est à la mode. Alors qu'une marque récente peut être perçue comme étant vieille, parce qu'elle a déjà été détrônée par une ou plusieurs autres ».

3.1.3 L'année de création de la marque : Il est généralement admis qu'une marque qui a duré dans le temps suppose que les dirigeants aient réussi à dépasser des situations conflictuelles dans le passé. Ceci est de nature à rassurer les consommateurs quant à la solidité et la durabilité de leur relation avec la dite marque dans le futur. Plus la marque existe depuis longtemps sur un marché, plus la proximité de la marque par rapport au consommateur sera grande. Selon Michel (2004) « le rappel de l'année de création de la marque représente un bon moyen pour légitimer le savoir faire de la marque : C'est le cas de Kronenbourg depuis 1919 ou encore le café Richard fondé depuis 1892 ». Le spécialiste des marques Georges Lewi distingue de son côté trois étapes dans le cycle de vie de la marque, le temps de « l'héroïsme » dont l'âge de la marque varie de 0 à 20 ans, le temps de la « sagesse » de 20 à 50 ans et le temps du « mythe », pour les marques de 60 ans et plus. Les deux premières étapes étant pour la marque le passage obligé avant de monter vers la représentation mythique, et donc par là-même vers l'immortalité.

3.2 Les variables tenant à la politique du produit...

3.2.1 Nom de la marque : La majorité des auteurs mentionne que la personnalité d'une marque se forme à partir du nom de la marque dans la mesure où ce dernier tend à développer un sentiment positif à l'égard de la marque (Aaker, 1997). Kapferer (1996) précise que « le nom fut choisi précisément pour véhiculer certaines caractéristiques objectives ou subjectives de la marque ». C'est pourquoi, il faut d'abord établir solidement son nom, auquel pourront être ensuite attachés les traits de personnalité de la marque (Aaker et Lendrevie, 1994). D'ailleurs, les créateurs de nom de marque utilisent de nos jours plus de lettres que des chiffres en pensant que ces derniers sont froids et n'évoquent pas grande chose. Ainsi, Twingo et Kangoo font plus appel à l'imaginaire du consommateur que s'ils s'étaient appelés R7 ou R23. Alors que d'autres créateurs suggèrent que la présence des chiffres dans le nom de marque renforce l'image technologique de la marque. D'autres ont tendance à utiliser une double syllabe identique : Naf-Naf, Nana, Anaïs Anaïs, Tam-Tam... Ces noms sont affectifs, car ils évoquent une réalité enfantine et permettent à la marque de renouer avec ses origines. Selon l'agence Nomen, le recours à la lettre « x » suppose sérieux et solidité tandis que l'usage des « o » et des « a » suggère rondeur et féminité. Le nom choisi peut alors évoquer un univers de valeurs masculines ou féminines. Drakkar, Brut sont associés à des valeurs masculines alors que Nivea, Nana évoquent plutôt l'univers féminin.

3.2.2 La typographie : C'est une forme d'expression artistique et un outil de design très utilisés dans l'édition, l'affiche et qui a un rôle majeur pour les logos. Elle sert à mettre en valeur les mots et les textes, par le choix des caractères, la mise en page, les tailles. La typographie, comme les autres symboles, communique l'essence et les valeurs de la marque. Elle permet aussi d'affirmer son identité propre et par la même occasion de se distinguer de ses concurrents. Les consommateurs peuvent ainsi associer par inférence une police de caractères avec serif (ou empattements) avec la tradition et ainsi déduire que la marque est traditionnelle. Pour apparaître moderne et simple, il suffit de choisir une police sans serif. De plus, une publicité avec des espaces blancs considérables entre les phrases peut connoter chez eux la simplicité et la pureté de la marque. Ainsi, la typographie choisie par LEGO donne un esprit de jeunesse et de dynamisme. De même, la typographie de Coca Cola est ronde et manuscrite, italique marquant un certain dynamisme lié à la vertu "énergétique" alloué à la boisson. Cet effet est accentué par les courbes fluides des lettres "C" qui dessinent un mouvement.

3.2.3 Le packaging : Au-delà de sa fonction technique d'emballage, le packaging constitue régulièrement un vecteur d'identification, de reconnaissance et de distinction sur un marché de biens de consommation peu différenciés. C'est un outil important pour exprimer les valeurs de la marque. En effet, plusieurs produits ont fait l'objet d'anthropomorphisation grâce au design. La bouteille de Coca Cola par exemple, en ayant une surface concave et une surface convexe, ressemble incidemment à un corps de femme. C'est encore le même cas pour Pammy de Virgin Cola qui reprend les formes du corps de Pamela Anderson. L'objectif est, in fine, de faciliter l'anthropomorphisation de la marque (Ambroise et Valette-Florence, 2010). Plusieurs auteurs ont également analysé la question du lien entre l'angularité des formes et les perceptions de puissance. Ainsi, les formes anguleuses induisent des caractéristiques telles que l'énergie, la solidité et la force alors que les formes rondes ont tendance à susciter des comportements d'approche, une attitude amicale et une perception d'harmonie (Pantin-Sohier et Lancelot Miltgen, 2012)

3.2.4 La couleur du produit : La couleur joue un rôle crucial en matière de la communication publicitaire, d'identité visuelle des marques et pour les choix chromatiques en matière de packaging. Certaines marques sont directement identifiables par leur couleur. Ainsi, pour se distinguer avec le rouge de Coca-Cola, Pepsi a choisi le bleu comme sa couleur caractéristique. C'est le cas également de Kraft Foods avec Milka qui a volontairement choisi la couleur mauve pour se démarquer de ses concurrents et être plus visible en linéaires. La couleur fait partie des antécédents de la personnalité de la marque identifiés par de nombreux auteurs. Mattel, par exemple, a joué sur les nuances pour sa Barbie en fonçant le rose bonbon afin de vieillir légèrement la marque. Pantin-Sohier et Brée (2004) ont montré par exemple que la bouteille d'eau minérale de couleur bleue est jugée plus sophistiquée que la bouteille rouge aux Etats-Unis alors que c'est la bouteille rouge qui reçoit un meilleur score sur cette dimension en Suède. Les répondants considèrent également que la bouteille de couleur rouge est plus rude que celle de couleur bleue que ce soit aux Etats-Unis ou en Suède. Enfin, la bouteille bleue est jugée plus excitante que la bouteille de couleur rouge dans les deux contextes culturels.

3.2.5 Le pays d'origine : Le pays d'origine d'un produit pourrait être à l'origine de certaines croyances. Il a été établi, notamment, que le pays d'origine influence la perception et l'attitude du consommateur sous plusieurs aspects, dont la qualité et le prix perçus. Plusieurs chercheurs s'accordent d'une façon générale à signaler qu'il existe des attitudes stéréotypées à l'égard des produits étrangers dans le sens où le consommateur utilise l'image du pays d'origine producteur du produit sur un plan symbolique (Allemagne-solidité, France-luxe, Italie-esthétique). En effet, les marques qui expriment un certain statut social sont nécessairement étrangères. Ceci est dû actuellement à leur coût plus élevé et à l'association à un style de vie étranger pour ceux qui les achètent. De plus, les marques internationales et plus précisément celles des pays industrialisés sont jugées de meilleure qualité et en plus elles sont considérées comme étant de prestige du simple fait qu'elles sont d'origine étrangère. Certains chercheurs avancent, dans un essai de synthèse du rôle joué par la notion du pays d'origine, la notion de capital-pays, par mimétisme avec celle de capital-marque (Allameh et al, 2012).

3.2.6 La stratégie d'extension de marque : La pratique de l'extension de marque consiste à transposer les valeurs fondamentales de la marque sur un nouveau produit. C'est le cas par exemple de la marque Bic qui a fondé son succès sur le stylo à bille jetable s'est diversifié avec le briquet jetable et le rasoir jetable. En effet, le consommateur qui connaît et apprécie la marque forte a tendance à transférer cette image sur les nouvelles catégories de produits. Ainsi, l'image de minceur et d'équilibre alimentaire attribuée aux produits laitiers à 0 % de Tallefine a permis à Danone d'étendre sa marque à l'eau minérale Tallefine. Une des clés de succès pour une extension réside dans le " fit " qu'il doit exister entre la catégorie de produit de l'extension de marque et les associations véhiculées par la marque mère, c'est-à-dire son image. Un pas supplémentaire fut franchi par Kapferer (1996) qui affirme que « *l'extension de marque, loin d'affaiblir la marque, souvent la revigore et lui donne jeunesse* ».

3.2.7 Le co-branding : Il s'agit en fait d'une association de deux marques pour le développement, la commercialisation ou la communication d'un produit ou d'un service. A travers une opération de co-branding, une

marque (dite marque invitée) se lie non seulement avec une autre (dite marque accueil) mais elle s'associe également avec ses valeurs et ses traits de personnalité. Les valeurs de l'une se trouvent transférées sur l'autre, ce qui accroît leur qualité aux yeux des consommateurs. Toutefois, le plus grand risque est de perdre son identité. C'est la raison pour laquelle les praticiens préconisent, en plus de la campagne promotionnelle sur l'opération de cobranding, de poursuivre la communication sur sa propre marque. La firme automobile italienne Fiat, par exemple, a réussi à transférer la valeur clé de chaque partenaire sur sa voiture Fiat 500. Elle est devenue beaucoup plus glamour, plus mode et plus chic avec son partenariat avec Gucci. Elle a associé son image à un look et une signature branchée, jeune, décalée en lançant la Fiat 500 Diesel. Avec la Fiat 500 Barbie ; une série limitée extravagante et drôle ; elle est rendue remarquable et remarquée. Pour la promotion de la Fiat 500 TwinAir une application Iphone et Ipad a été créée et relayée sur Facebook permettant ainsi une affirmation de la marque dans le monde des technophiles connectés.

3.3 Les variables de communication...

3.3.1 La communication publicitaire : La volonté de donner à la marque les attributs d'une personne est ancienne. Ernest Dichter affirmait depuis longtemps que « *Le publicitaire doit garder à l'esprit qu'après avoir dépensé des millions de dollars en publicité, en relations publiques et en merchandising, la vraie mesure de son succès, c'est la création d'une personnalité et d'un caractère distinctif pour sa marque* ». Bien entendu, la communication publicitaire représente un instrument d'importance vitale pour la création et le maintien de la personnalité de la marque. C'est une source importante d'inférence. Bouhleb et al (2011) indiquent que « *les marques sont des objets inanimés, associés à des traits de personnalité à travers la communication marketing* ». Kapferer (1996) de son côté indique que « *dès lors que la marque communique, elle acquiert un caractère qui lui confère une personnalité* ». A titre d'exemple, Nescafé est une marque chaleureuse et sympathique. Cette perception est à rapprocher de sa communication publicitaire qui insiste sur la convivialité, le partage ou la complicité (Ferrandi et Valette-Florence, 2002).

3.3.2 Endossement par la célébrité : Maintes entreprises ont opté pour l'utilisation des stars dans leurs messages ou encore l'endossement par des célébrités en publicité. Une telle stratégie sert à obtenir et à maintenir un taux de notoriété satisfaisant dans la mesure où les célébrités attirent l'attention vers les publicités dans lesquelles elles apparaissent et les marques sur lesquelles elles s'alignent. Kapferer (1996) signale que « *la voie facile pour doter la marque d'une personnalité est de lui trouver un porte-parole, une effigie réelle ou symbolique* ». En ce sens, Michel (2004) précise que « *le personnage publicitaire cherche à apporter une touche humaine à la marque* ». La marque Adidas, par exemple, incarne l'esprit d'équipe, la volonté, le courage, la persévérance et l'intégration depuis la victoire des Bleus à la coupe du monde de football de 1998. Toutes ces valeurs qui forment sa personnalité sont cristallisées par son principal porte-parole, Zidane. Cependant, plusieurs marques se sont séparées de leur personnage fétiche. Un cas exemplaire est loin d'être unique est la marque Vedette suite à la mort de la mère Denis. Les marques doivent donc éviter la création d'un personnage trop réaliste qui induit une identification au personnage qu'à la marque.

3.3.3 Les symboles animaliers : L'un des moyens de s'octroyer plus de souplesse et de liberté est le recours à la représentation animale dans le choix du logo de la marque. Les animaux, largement utilisés pour leur capital sympathie et leur charme, permettent aux marques de s'associer à leur symbolique. Selon Michel (2004), l'intérêt des symboles animaliers est qu'ils permettent d'exprimer clairement les valeurs de la marque et qu'ils n'immobilisent pas la marque dans un personnage réaliste. C'est le cas de l'ours en peluche qui symbolise la douceur de l'adoucissant Cajoline. Le lapin, symbole d'abondance et de travail, était l'animal parfait pour symboliser l'énergie supérieure des piles Duracell comparée à l'abondante concurrence des autres piles salines. Le lion, pour la barre chocolatée Lion de Nestlé, symbolise l'énergie, la force et la puissance. Ainsi, dans l'univers des produits destinés au petit déjeuner des enfants, les animaux symbolisent assez spontanément les notions de vitalité et dynamisme.

3.3.4 L'utilisateur typique : La congruence entre la personnalité de la marque et la personnalité des consommateurs est un concept qui suscite un intérêt grandissant tant auprès des managers que des chercheurs en marketing. En effet, les recherches prouvent que les consommateurs cherchent des marques dont l'image ou la personnalité est congruente avec leur identité ou leur personnalité. Certains praticiens s'appuient sur l'image de l'utilisateur typique, c'est-à-dire l'ensemble des caractéristiques humaines que les consommateurs associent à l'utilisateur type de la marque pour développer les associations de personnalité d'une marque (Aaker et Lendrevie, 1994). Les consommateurs sont donc des vecteurs de création et de transmission des traits de personnalités des marques. Par exemple, un utilisateur d'Apple pourra s'identifier comme quelqu'un de désinvolte, individuel et créatif. Keller (2002) remarque également que « *si les clients pensent que de nombreuses personnes utilisent telle marque, ils peuvent considérer celle-ci comme populaire ou comme un leader de marché* ».

3.3.5 La musique : Il est généralement admis que la musique, via les évocations qu'elle convoie, est capable de faire naître des croyances d'image autour de la marque qu'elle accompagne. Les chercheurs signalent que la musique classique a des caractéristiques assez particulières car elle est calme, raffinée, distinguée et permet de détendre ceux qui l'écoutent. Elle est donc facilement associable aux produits de luxe et notamment aux parfums. « *Drakkar noir* » de l'OREAL a toujours été un produit rebelle et révolutionnaire qui a bousculé les règles du monde de la parfumerie. Pour faire ressortir cette caractéristique, un extrait rock a été introduit dans le spot commercial. Si la musique occupe une place importante dans l'explication de l'effet publicitaire et de l'influence de la musique d'ambiance, d'autres sons sont présents dans l'environnement du consommateur. Par exemple, le bruit de claquement des portières sert d'indicateur, souvent inconscient, de la solidité des voitures. De même, le bruit du moteur révèle sa puissance.

3.3.6 Le Web : Les marques disposent aujourd'hui d'une nouvelle technique relationnelle à travers le Web pour développer leur discours sans les contraintes matérielles des médias de masse traditionnels. En effet, Internet constitue une opportunité d'expression de la philosophie de la marque. Il a donné naissance à de nouveaux supports publicitaires dont l'avantage principal est naturellement de pouvoir capitaliser sur l'image de marque et sur la notoriété spontanée. En effet, les individus qui ont une attitude positive vis-à-vis du site visité ont une perception plus jeune et plus moderne de la marque que les individus non exposés (Michel, 2004). En évaluant la personnalité de marque de LinkedIn, Allameh et ses collègues (2012) ont également conclu que les utilisateurs pensent que ce dernier est créatif, unique et fiable. Toutefois, Michel (2004) pense que les associations telles moderne, technologique, dynamique, nouveau, adaptation et innovation sont les plus fréquemment citées et elles sont liées au média Internet en général et non pas à la marque en particulier.

3.3.7 Le parrainage : C'est une technique de communication qui recouvre les actions de sponsoring et de mécénat. C'est un bon moyen pour l'entreprise de devenir un acteur social aux yeux du public en participant à des activités sportives ou culturelles. Il contribue fortement à l'amélioration de sa notoriété en attribuant une visibilité forte et durable de sa marque ou de son nom surtout lorsque l'événement possède un fort impact auprès de la cible de communication. Il est généralement admis que le sponsoring, par exemple, rendait l'entreprise plus dynamique, plus attirante et plus sociale dans l'esprit des consommateurs. Les recherches menées précisent également que pour positionner une marque comme sincère, les dirigeants auraient intérêt à parrainer des émissions d'information ou sportives. D'autres qui voudraient conférer à leur marque un caractère excitant devraient s'orienter vers le parrainage d'émissions sportives, de comédies, d'émissions de télé-réalité ou d'émissions de variétés. Selon Lee et Cho (2009), les traits de personnalité associés à un ballet ou à des événements de musique classique sont «sophistiqué», «élite», «haut de gamme» et «sérieux» alors que la personnalité des arts de masse est «jeune», «accessible», «sympathique», «actuelle», «innovante» et «commerciale».

CONCLUSION ET VOIES DE RECHERCHE

La personnalité de la marque offre une réelle perspective de création, de développement et de gestion des marques basés sur le transfert de caractéristiques humaines aux marques. Ainsi, il semble fructueux pour le milieu industriel de chercher à appréhender le concept non pas directement, mais plutôt par le truchement de ses antécédents. Grâce à une revue de la littérature relativement hétérogène, il nous a été possible de mettre en exergue une série d'antécédents que nous avons choisi de les classer, à l'instar de Wysong *et alii* (2002), en trois catégories à savoir les variables structurelles se rapportant à l'entreprise, les variables tenant à la politique du produit et les variables de communication.

Les chercheurs suggèrent que la personnalité de la marque est largement subjective et découle de l'interprétation du consommateur. Ainsi, il devient pertinent de se demander si le processus perceptuel de ce dernier ne peut pas être modératrice de la relation entre la personnalité de la marque et ses antécédents. Cet article néglige toutefois des développements récents tendant à démontrer les conséquences de la personnalité de la marque. Il serait d'autant plus intéressant de dessiner un modèle plus précis englobant à la fois les antécédents et les conséquences de la personnalité de la marque.

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