WHAT FACTORS DRIVE CORPORATE CUSTOMER SATISFACTION WITH E-BANKING SERVICES

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Abstract

Due to the burgeoning development of electronic commerce (e-commerce), the broader applications of emerging service—Internet banking (e-banking) services have been introduced and provided by financial holding companies or banks at an accelerating rate in recent years since they can provide efficient, reliable, secure, and convenient financial services, such as online payment, deposit/loan, trading, and clearing/settlement, via electronic channels (e-channels, e.g., Internet and phone) for customers. E-banking services not only can create new competitive advantages, perhaps, but also can improve their relationships with customers for banks. Obviously, e-banking can offer better services required by corporations and individuals, it could be a strategic niche no matter for banks or their customers. Conceivably, how to implement e-banking successfully is becoming a critical management issue. Unfortunately, research pays scarce attentions on what factors drive success of e-banking, particularly from corporate customers’ perspective. For the reason, this paper attempts to explore what factors affect corporate customer satisfaction with e-banking (CCSEB) which is one surrogate variable of success of e-banking services. Based on a survey of 178 respondents collected from Taiwan companies, the results support that environmental, organizational, and globalization factors will affect customer satisfaction with e-banking significantly. Furthermore, there exist a reciprocal relationship between customer satisfaction and post-usage favorite behavior. We believe the results and findings proposed in this paper not only can offer in-depth insights for practitioners about how to implement e-banking successfully, but also can be further directions for researchers interested in designing related theories.

Keywords: Corporate e-banking service, Customer satisfaction, Post-usage favorite behavior
1 INTRODUCTION

During the recent years, the development of e-channels have dramatically changed the rules and operation in the banking industry (Gunasekaran & Love 1999). Meanwhile, the industry has moved instantly to deploy and offer new banking services via e-channels for customers (Gonzalez & Quesada & Picado & Eckelman 2004), and in consequence the e-banking services have boomed promptly (Aladwani 2001). Today, several financial institutions are endeavoring to emphasize customer-oriented services. For this sake, it is crucial to implement new banking services in order to develop and keep better relationships with customers (Gonzalez & Quesada & Picado & Eckelman 2004), especially corporate customers since they contribute major profits (Tyler & Stanley 1999; Zineldin 1995). In the banking industry, bank-corporate customer relationship remains a key issue as businesses devote to keeping a higher competitive advantage in the market (Kandampully & Duddy 1999). The relationship between banks and corporate customers is the most important factor in the success of new financial services (Easingwood & Storey 1993). Hence, building up competitive predominance almost depends on customers’ satisfaction with banking. It is recognized that banks gaining higher customers’ satisfaction will have a conspicuous marketing ascendancy because the higher customer’s satisfaction is associated with greater revenues, increased cross-sell ratios, higher customer retention (Gonzalez & Quesada & Picado & Eckelman 2004; Nilsson & Johnson & Gustafsson 2001), and bigger market share (Bowen & Hedges 1993).

In this study, we examined vertical links between banks and corporate clients and the levels of bank incentives initially. The subsistent literature within marketing had an almost specially demand-side orientation; that is, it probed into traits of firms most likely to adopt innovations. However, supplier marketing schemes and incentives were sustaining in encouraging satisfaction. The economics literature was rich with ideas for proceeding further supply-side research (Gatignon & Robertson 1989). Internal organizational elements like innovative culture, technology readiness for corporate clients’ employees, and top management support for business were used to explore the relationship subsequently for solving problems pertained to resources limitation within SMEs. Eventually, few empirical studies had examined the influence of internationalization and corporate e-banking on firm performance (Annavarjula & Beldona 2000; Sung 2006). However, these studies had, on the whole, yielded mixed or conflicting results. The present research was an attempt to achieve an explicit knowledge of this relationship so as to be beneficial to build a bridge between academic insights and practical business applications.

2 DEVELOPMENT OF RESEARCH FRAMEWORK AND HYPOTHESES

![Figure 1. Research framework for 3 major factors driving CCSEB](image)

2.1 Vertical coordination and incentives for bank-corporate client relationship

Corporate customers chose their banking relationship on a product by product case, moreover,
there was differentiation between the fundamental norms of bank selection with price (Athanassopoulos & Labroukos 1999). By and large, banks desired to establish, maintain, and enhance lasting long-term partnership relationships with corporate clients. Suggested that a differential strategy would be of great interest to banks with the most excellent ability to differentiate their product/service mix (Zineldin 1996). Corporate e-banking services were just right the best solution of cross-platform for product/service mix in the present day. With the incremental utilization of corporate e-banking services by enterprises, it started to change the nature of banks-corporate clients relationship (Ibbotson & Moran 2003). In view of above-mentioned status, we had an idea that improving the poor coordination between banks and their corporate clients was through vertical coordination and banks’ incentives for businesses from supply side factors (Gatignon & Robertson 1989). Vertical coordination meant that industries in suppliers and customers achieved a high level of vertical interdependence had a tendency towards coordination and connected relationships (Palmer 1983). Such coordination was correlated with better information flow and faster adoption (Kimberly 1978). General ways were of visiting customers and informing them about relevant information they needed. Supplier incentives were provided for the firms by banks to promote adoption of innovation like corporate e-banking (Gatignon & Robertson 1989). This factor could be deliberated upon supplementary to the vertical coordination. Besides, the supplier incentives usually were price-encourage adoption all the time including discounts, trial version of product/service without payment, or key client for priority of service. Such economic and financial incentives had become accepted instruments for the implementation for encouraging the widespread use of new technologies (Kocagil 1997), and important in multiplex information system domains containing e-business supply chain coordination (Ba & Stallaert & Whinston 2001). These two supply-side factors were identified to be particularly significant means in interpreting adoption and achieving early adoption of new technologies. Satisfaction with a new technology was significantly in connection with the adoption and degree of use of the new technology (Crum & Premkumar & Ramamurthy 1996; Lubbe 2007). As a result, there were two hypotheses presented below:

**H1.** The better vertical coordination between banks and their corporate clients, the more CCSEB

**H2.** The more bank incentives for businesses, the more CCSEB

**2.2 The level of innovative culture of organization, technology readiness for corporate customers and top management support for business**

The innovative culture implied that a climate that was forbearing of failure and within which information permissively flowed (Jarvenpaa & Staples 2000; Leonard & Sensiper 1998), what is more, it reflected the judgment that change and creativity were on their own initiative encouraged and rewarded as well as it highlighted learning, and rational risk-taking (Kim & Lee 1995; Koys & DeCotiis 1991). Innovativeness, as an element of culture, was precedent to organizational learning (Conrad 1999). Climbing global and intestine competition has reinforced the import of innovativeness for successful business performance (Nakahara 1997). Innovativeness which was the totality of a company’s venture and innovation actions could be facilitated the business accrue new abilities and amend its performance (Guth & Ginsberg 1990; Lumpkin & Dess 1996; Stopford & Baden-Fuller 1994). It could aid the company access new businesses and exploit new income in both intestine and international markets as well (Miller 1983; Zahra 1993). Innovativeness was contributory to improved profitability and evolvement (Covin & Slevin 1991; Zahra 1993). The existence of an innovative culture enhanced a firm’s performance (Conrad 1999), collectively implicated, user satisfaction was significant related to performance (Gelderman 1998). An innovative culture was more advantageous to the successful execution of advanced technologies than more mechanistic organizations which were characterized by inflexibility and constraint (Zammuto & O’Connor 1992). Then, there was one hypothesis presented below:
H3. Innovative culture of organization was related positively to the likelihood of CCSEB

The technology-readiness structure mentioned that people’s aptitude for accepting and using new technologies for completing objectives in home life and at work (Parasuraman 2000). The structure could be seen as a holistic mindset being due to an intention of psychological preference and abhorrence that jointly determine an individual’s inclination to use new technologies. A fundamental outcome of technology’s growing role was the proportional bloom in self-service technologies that customers were required to interact with technology-based systems rather than company personnel (Bitner & Brown & Meuter 2000; Meuter & Ostrom & Roundtree & Bitter 2000). The growing affection of customers having to serve themselves through technology-based systems was close not only to service sectors but also to goods businesses (Parasuraman 2000). In a similar trend, practically all companies competed on the basis of customer service and service supplies, furthermore, got beyond industrial boundaries (Bitner & Brown & Meuter 2000). Although the positive and negative opinions about technology might exist simultaneously which were likely to vary across individuals, customers varied in the light of their beliefs/feelings about the diverse choices and that those beliefs/feelings were positively correlated with intentions to use (Dabholkar 1996). As indicated by the foresaid discussion, an integration of positive and negative opinions about technology constituted the facet of technology readiness. The positive opinions motivated individuals toward new technologies, albeit the negative ones might fight them down. Specific customer perspectives and incentives might heighten or diminish adoption of new technologies as well (Dabholkar 1994; Davis & Bagozzi & Warshaw 1989). In those situations, satisfactory problem solution would determine not only on the employees’ skills but also on their technology readiness (Parasuraman 2000). Employees who conceived it as high on both interpersonal skills and technology readiness were possibly to be much more efficient in tech-support roles than those who were scarce on either basis. The technology readiness, as such, could serve as a supplementary filtering measure, along with traditional individuals-skills evaluation, in selecting staffs for tech-support positions (Parasuraman 2000). Whereupon, there was a hypothesis presented below:

H4: Employees within corporations with higher technology readiness were more satisfied with the corporate e-banking

Top management support was a critical repeated element vital for energetic information systems implementation in both large and small enterprises (Cerveny & Sanders 1986; DeLone 1988; Ginzberg 1981; Yap & Soh & Raman 1992). Successful information system implementation appeared as adequate organizational resources were applied toward, first of all, inspiring and then supporting the implementation endeavors. Owing to their leadership function, top management would enable to warrant adequate allocation of resources and serve as a revolutionary agent to create a more advantageous circumstance for information system implementation. Top management had the authoritativenss to affect other employees of the company, and more possibly to meet with success in conquering organizational resistance to adopt the information system. Powerful top management assistance was expected to contribute to greater transformation effectiveness and thus better information system performance for the identical level of information system input (Thong & Yap & Raman 1996). Involvement in information system projects might be much more crucial in a company where the CEO ordinarily made most critical decisions and was likely the only one who could take charge of information technology to business goal and strategy (Jarvenpaa & Ives 1991). An enthusiastic CEO was more possibly to support precious resources and adopt a wider-range insight to the advantages of information system implementation. As a result, there was a hypothesis presented below:
2.3 The level of internationalization for businesses and dependable e-banking services

In the current setting for incrementally dynamic, sophisticated, and competitive world markets, internationalization was seen as being a key component in business strategy and in order to survival and growth (Annavarjula & Beldona 2000). It was perceived as an critical strategic selection for those companies that were seeking out a retainable competitive advantage (Gary & Prahalad 1986). A company in seeking multinational markets as one of the perspectives of business was a businesslike exploitation of components which were included cost, operations, employees, and stock value. Significant incentives in a business’s decision to aim for overseas manufacturing could be the opportunity of savings in human resource or transportation costs, or the stock of merchandise for cheaper raw materials. Internationalization indicated that the degree to which companies operated internationally by investing in assets and/or managing activities in overseas markets (Cantwell & Sanna-Randaccio 1993; Teece 1981). It was shown that global orientation consolidated a firm’s capacity to improve the corporate economic performance, that is, firms with a higher level of internationalization also associated with higher performance (Bausch & Krist 2007; Belso-Martínez 2006; Kafouros & Buckley & Sharp & Wang 2008; Kennelly & Lewis 2002; McDougall & Oviatt 1996; Riahi-Belkaoui 1996). A main conceptualization of firm performance would involve in placing importance on indicators of nonfinancial performance besides those of financial performance (Dess & Robinson 1984; Geringer & Hebert 1991; Venkatraman & Ramanujam 1986). We attempted to use a compositive measure for internationalization that common performance (ratio of foreign sales to total sales), structural (ratio of foreign subsidiary companies to total subsidiary companies), and attitudinal (top management’s international experience) dimensions (Sullivan 1994). As earlier discussion, internationalization had a clear influence on firms’ performance. Likewise, the satisfaction was positively related to performance equally (Lai 2007). Thence, there was one hypothesis presented below:

H6. Likelihood of the level of internationalization for businesses would increase with CCSEB

Most enterprises have been affected by e-banking in one way or another (Gunasekaran & Love 1999; Ng & Pan & Wilson 1998). Nowhere had the participation of electronic commerce been more outward than in the banking industry. The security concern was probably one of the most challenging subject confronting organizations interested in conducting business over the Internet (Aladwani 2001). Customer-orientation, ease of use and diversification of products/services were treated as greatly significant in the top five of critical success factors among Korean, Japanese, and USA firms (Sung 2006). Speed, privacy and security also occupied preceding fifteen critical success factors. Those sixforesaid factors had very strong force on firm performance. As mentioned earlier, user satisfaction was significant related to performance (Gelderman 1998; Lai 2007). Accordingly, we assumed that the corporate e-banking had more possession of dependable services of Internet-based technologies, the customers would raise their satisfaction with it. Here was the hypothesis presented below:

H7: The greater level of dependable e-banking services, the more likely CCSEB

As mentioned earlier, there were three primary categories and they would affect subsequent user satisfaction and post-usage favorite behavior jointly or extraordinarily. User satisfaction and usage were compactly interrelated as was true in the main conceptions of the D&M model (DeLone & McLean 1992). Positive experience with use would result in higher user satisfaction, similarly, augmentative user satisfaction would result in augmentative use (DeLone & McLean 2003). In virtue of the user satisfaction and post-usage favorite behavior would happen. It was
supposed that the information system was to be proceeded if the users or top management of the system were positive, thus affecting and consolidating subsequent user satisfaction and post-usage favorite behavior and vice versa. Afterward we proposed that there was a supposition presented below:

H8: Post-usage favorite behavior was two-way associated positively with the likelihood of user satisfaction to each other

3 RESEARCH METHODOLOGY

The research framework conducted for this study was first used as the criterion for a literature review and the generation of the initiative appliance. This application was pre-tested, modified, and used to capture data in a cross-industrial survey of corporate e-banking users. Sample gathered in this study were used to further refine the application in following analysis.

The questionnaire was based on the prior researches. Four major sections could be identified in the questionnaire; the first two sections (questions 1 to 6) captured the cognition of vertical coordination with principal bank and incentives for businesses in each company (Gatignon & Robertson 1989), while the second three sections (questions 7 to 17) determined the present situation of the organization (Bock & Zmud & Kim & Lee 2005; Jones & Jimmieson & Griffiths 2005; Parasuraman 2000; Rangarajan & Chonko & Jones & Roberts 2004; Thong & Yap & Raman 1996; Thong & Yap 1995). The third two sections (Q18-Q26) were designed to explore the perception of the company that contributed to greater user satisfaction and the fourth two sections (Q27-Q30) were designed to identify the perceived corporate e-banking services by the company (Aladwani 2001; Annavarjula & Beldona 2000; Mirani & Lederer 1998; Sung 2006). A Likert type of scale was used, 1 to 5, with 5 being most significant and 1 the least (Ghosh & Liang & Meng & Chan 2001).

Interviewees in the pilot test were requested to first completely fill in a questionnaire and then to afford an open-ended comments on the contents, readability, and format, as well as to detect any other potential problems. The pilot test was adopted through a series of face-to-face in-depth interviews with five financial/accounting managers/officers who have used the corporate e-banking services in their companies.

A cross-industrial survey of corporate e-banking services users was used for sample collection. A questionnaire was developed for this end. Respondents were asked to reply to the questions in the context of experience in corporate e-banking services usage. The questionnaire was mailed to 200 participants who are employed in financial/accounting divisions of chosen companies. After a reminder mailing to nonrespondents, a total of 178 valid responses were received with the response rate was 89%.

4 THE EMPIRICAL FINDINGS

4.1 Measurement of reliability

The application of the reliability and validity determines the instrumental analysis of research. Describing the application of the reliability and its calculation was prior (Torkzadeh & Doll 1991). Reliability mentioned that the scores of a set of measurements were consistent and could be estimated by the internal consistency of the items with Cronbach’s $\alpha$ (Klenke 1992). The improved 30-item instrument had a reliability of 0.9368 and the reliability of each factor in Cronbach’s $\alpha$ was surpassed the common minimum threshold of proposed value of 0.7 (minimum = 0.81), indicating a acceptable reliability of the instrument.

4.2 Measurement of validity

In this study, we adopted correlation matrix analysis to inspect construct validity of the improved instrument (Doll & Torkzadeh 1988; Hu & Chau & Sheng & Tam 1999). Construct validity states clearly whether the results derived from the measurements were accorded with the theories behind the instrument was planned or not. Construct validity could be decided by
adopting item-to-total correlation analysis (Doll & Torkzadeh 1988; Ives & Olson & Baroudi 1983; Mitchell 1985). That is, consequently, the reason we adopted through this measurement. Convergent validity was validated by determining whether connections among the scales of the same factor were greater than zero and fully larger to implement discriminant validity analysis (Aladwani & Palvia 2002). After analysis of correlation, the smallest within-factor correlations of every factor were: vertical coordination = 0.54; incentives for businesses = 0.69; innovative culture = 0.41; technology readiness = 0.53; top management support = 0.77; internationalization = 0.71; dependable e-banking services = 0.40; user satisfaction = 0.71; post-usage favorite behavior = 0.78. They were significantly greater than zero and larger sufficiently to implement discriminant validity analysis.

Discriminant validity was estimated by computing the times of number which an item correlates greater with items of other factors than with those of its own factor (Aladwani & Palvia 2002). This number ought to be less than 50% of the underlying comparisons for conforming to the criterion (Campbell & Fiske 1959). The correlation matrix showed ten paradoxes for underlying 786 comparisons, indicating acceptable discriminant validity.

### 4.3 Structural equation modeling

In this stage, the analysis was implemented by adopting structural equation modeling (SEM) of the CALIS procedure of SAS 8.01 program, offering calculations of parameters and examinations of fit close to LISREL. The seven conventional goodness-of-fit indexes were classified in Table 1. Although some indexes did not fit in with the criterion such as GFI and AGFI, most of them were approached it considerably. The research model, therefore, expressed an acceptable fit in with the questionnaires.

<table>
<thead>
<tr>
<th>Goodness-of-fit measure</th>
<th>Recommended value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square/degree of freedom</td>
<td>(\leq 3.00)</td>
<td>3.36</td>
</tr>
<tr>
<td>Goodness-of-fit index (GFI)</td>
<td>(\geq 0.90)</td>
<td>0.87</td>
</tr>
<tr>
<td>Adjusted Goodness-of-fit (AGFI)</td>
<td>(\geq 0.80)</td>
<td>0.79</td>
</tr>
<tr>
<td>Normalized fit index (NFI)</td>
<td>(\geq 0.90)</td>
<td>0.88</td>
</tr>
<tr>
<td>Non-normalized fit index</td>
<td>(\geq 0.90)</td>
<td>0.87</td>
</tr>
<tr>
<td>Comparative fit index (CFI)</td>
<td>(\geq 0.90)</td>
<td>0.91</td>
</tr>
<tr>
<td>Root mean square residual (RMSR)</td>
<td>(\geq 0.10)</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Table 1. Goodness-of-fit measures of the research model

After that, three SEM models involving seven independent variables and two dependent variables were determined to inspect our hypotheses. In these research models, we classified the parallel independent variables in one model for approaching the attribution of each independent variable closer. For example, vertical coordination and incentives for businesses were seen the factors as external ones. All of the independent variables had significant positive relationships on user satisfaction, moreover, user satisfaction and post-usage favorite behavior were interplayed positively as well. The path coefficients of each factor on user satisfaction were: vertical coordination = 0.08; incentives for businesses = 0.11; innovative culture = 0.11; technology readiness = 0.19; top management support = 0.09; internationalization = 0.07; dependable e-banking services = 0.55 at \(p \leq 0.05\) respectively. These results were assisted all the hypotheses we assumed.

### 5 DISCUSSION AND CONCLUSIONS

This paper had exploited corporate customers’ perspectives on Taiwan corporate e-banking services and had discussed the factors impacting on corporate customer satisfaction with e-banking. Within the factors of what the research had examined, it showed some of the
fundamental factors that affected corporate customers’ perspectives on corporate e-banking in Taiwan. At the moment, dependable e-banking service was still the conspicuous determinant of satisfaction — customers who detect better dependable e-banking services were more likely to perceive higher satisfaction about corporate e-banking services. The degree of technology readiness for employees also stood out as a principal factor to corporate bank customers. This finding was consistent with prior research about information system success, in which repeat usage, ease of navigation, and reliability of systems quality are regarded as elements of a successful information system dimension (DeLone & McLean 1992, 2003).

At this time of development of corporate e-banking services in Taiwan, it seems that a great deal of corporate customers have embraced it. As mentioned in the preliminary interviews with financial/accounting managers/officers, there are still some substitutions to reduce the applications of corporate e-banking services such as at-home service or on-call service. What the Taiwanese banks need to conduct is to review their corporate customers and classify them according to the company’s nature like the level of internationalization or the degree of innovative organizational culture for avoiding consuming of scarce resources. Besides, banks need to promote it more actively with top management of each firm in explaining the benefits to earn their more consolidated support for enhancing the satisfaction and usage of corporate e-banking services as well. Similarly, banks are able to improve the satisfaction and post-usage favorite behavior of corporate e-banking services with incentives such as cheaper charge for account transfer. Visiting customers regularly and informing them about relevant information they need also could be instrumental for establishing the closer vertical coordination. Most Taiwanese corporate e-banking service providers nowadays adopt a series of security facilitators of preservation, but a common concern still consists in less confidence in security and privacy mechanism on it. They need to offer knowledge to their customers about bank purpose to guard security of the network so as to form a higher level of trust of the web system. The web-based service channel must be well integrated into others so that customers could easily make contact with people who are trained to solve problems effectively, and banks must adopt strong customer orientations.

Overall, corporate customers were fairly positive about the satisfaction and post-usage favorite behavior with corporate e-banking services. Generally, as long as the satisfaction becomes higher the post-usage favorite behavior would follow, and vice versa. Corporate e-banking channel might be able to indirectly push greater customer loyalty through, which is critical in the ever more rival banking industry. The analysis results also demonstrated that it was going to take some work to fully comprehend the potential. There are still considerably numerous tasks that need to be conducted to realize corporate customer response to corporate e-banking service channels well.

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