

The Impact of Top Management Team and Organizational Culture on Product/Service and Process Innovation in Vietnamese Banks

Dao Hoang Duong¹, Fredric William Swierczek²

***Abstract** – In the dynamic economy of Vietnam, the financial industry plays a crucial role. Vietnamese banks need to innovate to support economic growth. The research focuses on the key factors that increase innovation in banks. The relationships between the quality of the Top Management Team, Organizational Culture and Process Innovation, Product/Service Innovation in Vietnamese banks are analyzed. The results are based on 15 leading banks in Vietnam including 354 high executive officers. The analysis shows the quality of the Top Management Team and the Organizational Culture of banks significantly increase Product/Service Innovation and Process Innovation.*

Keywords – Top management team (TMT), Organization Culture, Product/Service Innovation, Process Innovation.

INTRODUCTION

Innovation is the development and use of new ideas or behaviors in organizations demonstrated in terms of a new product, service or method of production new markets, organizational structures, or new administrative systems (Ana, Shanthi and Valle, 2014). It is accomplished through more effective technologies, products/services or processes. Product/Service innovation is a breakthrough in the market (Reankelius. 2009). Process innovation has positive impact on a firm's performance (Li & Atuahene-Gima, 2001, Perez-Luno et al., 2014).

Overall innovation supports economic growth and to the stability of financial systems (Lerner and Tufano, 2011). In the organizational context, process innovation is linked to effective changes in quality, productivity, and efficiency. In business, product/service innovation is linked to positive changes in competitiveness, profits, revenue, as well as the market share, and it can become a catalyst for growth (Salge and Vera, 2012). Executives continuously look for better ways to satisfy their consumer base with improved quality products and positive service through innovation with advanced technologies and organizational strategies (Heyne et al., 2010).

Overall innovation in banking can be defined as product/service and process innovation, which allow cost or risk reduction for the bank and/or the improvement of services (Arnaboldi and Rossignoli, 2015). In such a service industry, products and services are

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considered interrelated (Miles 1993, 2001, and 2004). Product/Services of Banks can be online payment with Internet or mobile phone, ATM. Banks Processes can be recognized as customers' credit rating, supporting customers with social network.

Overall innovation is a crucial factor in a competitive environment. In such as the dynamic and rapidly changing Vietnamese banking sector, this is a key factor for the success of banks. There is a need for research on the importance of product/service innovation as well as process innovation for banks there.

Overall innovation consists of successfully implementing creative ideas within banks and is closely related to organizational culture. The banks require a proper structure to adopt new technology (Argote, 1999). It is necessary to create and maintain supportive culture of innovation. Overall innovation should be supported by the top leaders of the banks. Executives and managers need to break away from traditional practice to enhance new approaches to the business. The quality of the top management team plays a key role in the success of innovative applications (Bel, 2009).

This study contributes to literature on innovation by assessing the effects of the Top Management Team's quality and the Organizational Culture on Product/Service and Process Innovation in the banking sector. There is almost no research on this approach in Vietnamese banking.

The next section presents the theoretical framework and literature review. The conceptual model and hypotheses are discussed in the third section. The fourth section presents the analysis and empirically tests the relationships. Finally, the main conclusion, contributions, limitations, and further development are discussed.

LITERATURE REVIEW

Dependent Variables

Overall innovation in banking sector can be divided into two types: Product/Service Innovation which relate to new or significantly improved characteristics of the Product/Service offered to customers. Process Innovations which are related to new or significantly improved methods, equipment or skills used to perform the service (Arnaboldi and Rossignoli, 2015). Product/Service Innovation and Process Innovation are the dependent variables.

Product/Service Innovation:

Product/Service Innovation was developed by Miles (1993, 2001, 2004). Product/Service innovation refers to new or improved products or services. In a service industry like banking, it is also new or improved ways of delivering products/services to customers.

Process Innovation:

Process Innovation in banking consists of a new or significant change in organizational delivery, operating system, information and communication technology or channels (Arnaboldi and Rossignoli, 2015).

Independent Variables

Top Management Team:

The bank's Top Management Team is considered because they have an important impact on organizational outcomes through the decisions they make (Thomas et al., 1993; Finkelstein and Hambrick, 1996; Carpenter et al., 2004). The importance of the Top Management Team in corporate innovation is confirmed (Chemmanur and Simonyan, 2017). These individuals are considered as strategic decision makers based on the interactions of team members with different cognitive perspectives (Wiersema and Bantel, 1992). Their decisions and actions directly affect organizational innovation and new product/service performance (Bantel and Jackson, 1989; Smith et al., 1994, Walker et al., 2010).

The higher the level of education attained, the more receptive to creative solutions and innovation the executive will be (Bantel and Jackson, 1989; Thomas et al. 1991). The level of the Top Management Team's education affected the number of new products and services through the firm's commitment to innovation (Smith et al., 2005). The level of education affects the executive's ability to combine and create knowledge. Executives with higher levels of education are more likely to share new knowledge. This process will promote the creativity, new ideas, leading to innovation. The age, the level of education, the experience, the functional background and the ownership of the Top Management Team significantly affect the bank's ability to increase innovation (Shuying et al. 2017). Executives encourages by innovative ideas if they have foreign professional experiences. Through the experiences with different cultures, they are exposed their experience creative innovations. This will enhance the innovation process in the banks (Godart et al., 2015).

The success of the Product/Service and Process Innovations depends on executives with enough seniority to know the organization and the resources needed for innovation. They have a strategic picture of their business units. Senior executives are fortified with enough experience in developing and implementing the changes effectively through the organization and they can control the actual budgets to support the innovation (Gadner, 2009). The future value of the bank (i.e. stock price) may influence the executives to increase their innovations because holding stock of the bank will emphasize profit ability for the bank (Gadner, 2009).

Innovative ideas also can be identified through the Top Management Team network (Gadner, 2009). Banks are not only developers of innovations in financial industry, but they are the end users of innovations developed in other sectors (Arnaboldi and Rossignoli, 2015). Banks jointly develop innovation with non-financial firms such as software houses or specialized technology firms. From the network in banking as well from technology experts, executives in banking can learn about innovations, new technologies, and be more successful in developing and implementing innovations (Arnaboldi and Rossignoli, 2015).

Organization Culture:

Organizational Culture strongly relates and enabling organizations to initiate innovative activity (Salge and Vera, 2012, Buschgens et al., 2013). It consists of competitiveness, risk taking, learning capability, innovation capability and operational autonomy (Malik and Wilson, 1995 and Hogan and Coote, 2014). Some barriers to innovations in Banks includes unsupportive organizational culture, restrictive mindset, financial or skill barriers and limited information (Das et al., 2017).

Kiziloglu (2015) confirmed the influence of learning capability on innovations in banking. The learning orientation increases level of innovation adoption (Slage and Vera, 2012). Learning refers to the development of new application with the potential to change individual and organizational behaviour (Murray and Donegan, 2003; Huber, 1991; Slater and Narver, 1995). Firms that have developed a strong learning culture are good at creating, acquiring and transferring knowledge (Garvin, 1993; Huber, 1991). The learning capability culture of organization relates to the success of innovations.

Organizational autonomy pertains to the extent to which decision-making is decentralized (Malik and Wilson 1995). In which executives have more perceived control over their decision (Chen, 2007). Innovation requires capability to exchange and combine knowledge across departmental boundaries (Gerwin and Moffat, 1997). Autonomy improves the success of applying and implementation overall innovations (Hamel, 2006). Innovation processes can encounter various internal barriers. For example, executives and managers believe that sharing ideas with peers in other departments may reduce the resources allocated to their departments during the implementation of innovative solutions. They would make them reluctant to invest, or even resist cross-functional relationships (Griffin and Hauser, 1996). The successful implementation of a firms' innovation depends much on the effective combination of knowledge across departments (Alegre and Chiva, 2008; Love and Roper, 2009).

Knowledge sharing increases innovation in the firm (Wang and Wang, 2012). Managers must collaborate and share knowledge to ensure that the new products/services meet both technological and market requirements (Love and Roper, 2009; Berends et al., 2006). To increase innovation, firms must be able to combine and integrate function-specific knowledge through the interactions between managers in different functional departments (Kim and Mauborgne, 1998).

In the digital era, the world of work is changing rapidly with the increase in the use of technology. Businesses are becoming increasingly competitive. (Engelberger, 1982). Competition and competitiveness also was confirmed that plays a crucial role for innovation motivation (Mytelka, 1999). This relationship was confirmed by Simciuc (2016) and Gupta (2016).

A risk-taking cultural plays the crucial role in innovations of Banks and enhances the number of innovation (Llopis et al., 2013; Garcia-Granero, 2015).

Innovation capability is formed by resources support for innovation such as technology, human or capital resource (Hurley and Hult, 1998; Lawson and Samson, 2001).

HYPOTHESES DEVELOPMENT

Conceptual model

The conceptual model is summarized in Figure 1, it focuses on the relationship between Top Management Team quality, Organizational Culture and Level of Product/Service Innovation and Level of Process Innovation.

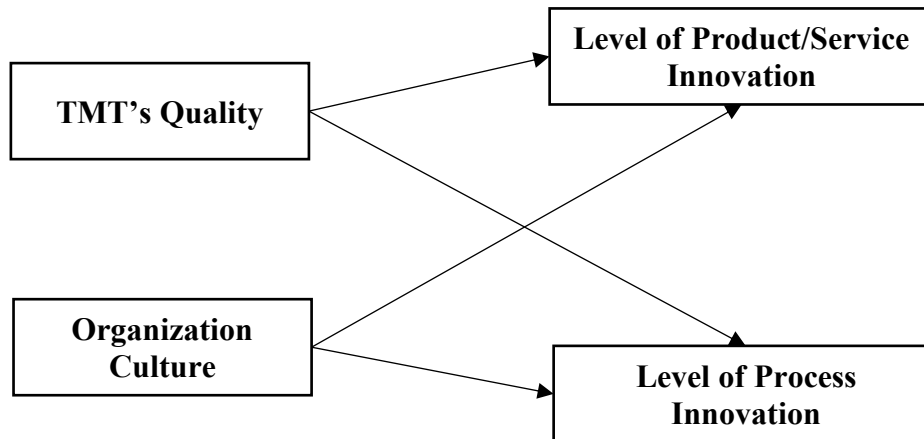


Fig. 1. Conceptual Model.

This model is based on the literature review of the relationship between the Top Management Team quality, Organizational Culture and the Product/Service and Process innovation.

The quality of the Top Management Team has positive effects on innovations (Gadner, 2009; Arnaboldi and Rossignoli, 2015; Chemmanur and Simonyan, 2017; Shuying et al., 2017). The Organizational Culture also affects to the level of innovations (Salge and Vera, 2012; Buschgens et al., 2013; Kiziloglu, 2015; Das et al., 2017).

In summary, the following hypotheses are considered.

Hypotheses

H1: The quality of the Top Management Team positively increases Product/Service Innovation.

H2: The Organizational Culture positively increases Product/Service Innovation.

H3: The quality of the Top Management Team positively increases Process Innovation.

H4: The Organizational Culture positively increases Process Innovation.

METHODOLOGY

Research design

A survey was developed based on the researches of Gadner (2009), Arnaboldi and Rossignoli (2015), Shuying et al. (2017), Salge and Vera (2012), Buschgens et al. (2013), Kiziloglu (2015) and Das et al. (2017). The sample included 354 high executives from 15

banks. The organizational culture and top management team quality are measured with a Likert scale of seven points.

Finding

Table 1: Demographic

Average Age	40
Education Level	Bachelor: 67.8% Master: 29.1% PhD: 3.1%
Majors	Business Management: 21.5% Economic: 20.9% Finance: 25.4% Accounting: 3.7% Information Technology: 24.8% Electronics: 3.7%
International Experience	57.13%
Stock owned	61.9%
Seniority	> 10 years: 67.8% 5 – 10 years: 16.9% 2 – 5 years: 8.5% < 2 years: 6.8%

Measurements

Table 2. lists the reliability of the constructs used in the analysis by Cronbach’s alpha. The reliability of the constructs was acceptable.

Table 2: Reliability

Constructs	Standard alpha
Top Management Team Quality	
Network (relationship) in Banking	0.89
Network (relationship) in Technology	0.94
Organizational Culture	
Innovation Focus	0.96
Competitiveness	0.91
Risk Taking	0.90
Operational Autonomy	0.82
Learning Capability	0.93
Innovation Capability	0.82
Product/Service Innovation	0.95
Process Innovation	0.93

New variables

From the factor analysis, new variables are created: Top Management Team Quality, Organizational Culture, Product/Service Innovation and Process Innovation. The results for new variables from factor analysis where shown in Table 3.

Table 3: Factor Analysis for Variables

Top Management Team Quality	Proportion Var: 0.327
Loading	Degree (Q0) = 0.435 Seniority (Q2) = 0.450 Social relations in Banking sector (Q4) = 0.811 Technology Experts relations in banking sector (Q5) = 0.850
Organization Culture	Proportion Var: 0.724
Loading	Entrepreneurial Innovative (F61) = 0.998 Top Management Team commitment (F62) = 0.995 Competitiveness (Q7) = 0.888 Risk acceptance (F81) = 0.822 Preference to Risk (F82) = 0.661 Organization Autonomy (Q9) = 0.703 Communication (F101) = 0.852 Application (F102) = 0.819 Innovation Capability (Q11) = 0.856
Product/Service Innovations	Proportion Var: 0.662
Loading	Improvement of Product (F141) = 0.997 Product/Service Leader (F142) = 0.985
Process Innovations	Proportion Var: 0.665
Loading	Number of Process Innovation (Q15) = 0.963 First bank implementing process innovations(Q171) = 0.948 These processes were adopted by other banks (Q172) = 0.793 Successful in implementing process innovations(Q173) = 0.455

ANALYSIS AND RESULTS

The levels Product/Service Innovation is measured by the improvement of Product/Services, the recognition as a leader in the market and the number of innovations. Process Innovation is indicated by pioneer status and by the being followed by other banks. The level of Product/Service and Process Innovation is indicated by levels, rate terms (number of innovations per years or time length of implementation). To test the research hypotheses, the linear regression model was conducted. The results of the analysis are shown in Figure 2.

Hypothesis testing

The results for Product/Service Innovation are shown in Table 4. As H1 predicts, the relationship between Top Management Team quality and product/service innovation is strongly positive (0.620) and significant. Consistent with H2, the relationship between organizational culture and product/service innovation is strongly positive (0.167) and significant. The Top Management Team's quality and Organizational Culture can explain 41.37% of Product/Service Innovation.

Table 4: Linear Regression for Product Innovation
R²: 41.37%

Variables	Estimate	t value	Significance	Hypothesis
Top Management Team	0.620	6.272	0.00***	H1 accepted
Organization Culture	0.167	8.071	0.00***	H2 accepted

The results for Process Innovation are shown in Table 5. As H3 predicts, the relationship between Top Management Team quality and process innovation is positive (0.0895) and significant. Consistent with H4, the relationship between organizational culture and process innovation is also positive (0.0499) and significant. The Top Management Team quality and Organizational Culture can explain 35.22% of Process Innovation.

Table 5: Linear Regression for Process Innovation
R²: 35.22%

Variables	Estimate	t value	Significance	Hypothesis
Top Management Team	0.0895	3.379	0.08 (!)	H3 accepted
Organization Culture	0.0499	8.997	0.00***	H4 accepted

(!) $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; $p < 0.001$ ***

DISCUSSION

Theoretical Implications

Past research indicates that Top Management Team's quality supports the overall innovativeness of banks (Arnaboldi and Rossignoli, 2015 and Lee et al., 2017). This relationship was confirmed in this research for Vietnamese Banks. As the results show, the Top Management Team's quality positively increases Product/Service Innovation and Process Innovation. This research also indicates that Organizational Culture increases Product/Service Innovation and Process Innovation (Arnaboldi and Rossignoli, 2015).

Practical Implication

Vietnamese Banks can increase the Product/Service Innovation and Process Innovation through the support of the top management team and emphasizing organizational culture. Banks can hire or promote executives who have international experience and well-educated overseas. The Banks can organize training courses or invite international experts to improve the Top Management Team quality. The Banks can organize overseas training courses for Top Management Team to identify innovations, experiences and expand the Top Management Team network with other international bank executives. This will enhance the quality of the top management team. Additionally, developing the Banks' organizational culture to emphasize learning capability, risk taking, commitment, organization autonomy and resource the Innovation in Banks through leadership development. This combination of Top Management Team and Organization Culture should increase the Product/service and Process Innovations

LIMITATIONS

This research is subjective based on perceptions with no objective measures of actual innovation. The relationship of Top Management Team and OC and Process Innovation is low but significant. The research has been done only in Vietnamese banks. The different business situation of banks (i.e., state-owned bank, commercial banks, joined stock banks or foreigner banks) may have an impact on the level of overall innovation. The results offer opportunities for further research. First, the relationship between top management team, organizational culture, innovation and the performance of Banks could be assessed. In a Comparative study of Bank Innovation in ASEAN, this could add insight to the current literature.

CONCLUSION

This research explores the relationship among Top Management Team, Organization Culture and Product/Service and Process innovation in Vietnamese Banks. The research has collected data from 15 Vietnamese banks including 354 executives. The analysis shows Top Management Team's Quality and Organization Culture (learning capability, risk taking, commitment, organization autonomy and innovative capabilities) factors increase Products/Services Innovation and Process Innovation in Vietnamese Banks.

Through this research, Vietnamese may improve overall innovation by enhancing the quality of Top Management Team through hiring new high-quality executives or promoting current high-quality managers, organizing more international training courses or providing Banks' stock options. Banks can improve Organization Culture by encouraging creativity, accepting challenges or risks, autonomy and resources for creativity.

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