

Assessing Service Innovation and Customer Involvement in Malaysian Mobile Service Provider

Ainul Mardhiyah Nor Aziz and Noraini Abu Talib

Faculty of Management, Universiti Teknologi Malaysia, 81310 Johor Bahru, Johor, Malaysia

Abstract: Malaysian mobile service providers face the challenges in service innovation and to sustain competitive advantage in the industry. The importance of innovation for a company's competitive advantage and survival in increasingly intense changing markets is undisputed amongst scholars and managers. Realizing the importance of service innovation, we interpret the implementation and design of enhanced or new service innovation which involve customer and competitive advantage to sense impulses for innovation, transform organization operational capabilities to the desired state and finally seize the meaningful ways for change. Therefore, a new framework will be proposed in this study that service innovation structure into the 5 areas of systems, process, organization, tools or technology and strategy. Based on analysis of existing literature, we further recognize and elaborate the key factors in all of these five areas of service innovation. In this conceptual study, we are proposing a novel framework which is adopted from in SPOTS Model theory to contribute to deeper understanding of service innovation process and delivery. Besides, this framework also is beneficial to both practice and body of knowledge. It offers an overview that enables firms to more systematically drive service innovation capability areas. As for academia, it stipulates promising directions for future research.

Key words: Service innovation, customer involvement, competitive advantage, mobile service provider, Malaysia

INTRODUCTION

Innovation is gaining increasing recognition as a major competitive weapon and occupying a major part of the corporate strategy of many firms across the globe. According to Baregheh *et al.* (2009) a content analysis on the term "innovation" carried out within the organisational context is defined as the multi-stage process whereby organisations transform ideas into service or processes, new and improved products, differentiate themselves in order to advance and compete successfully in their marketplace. On a continuous basis, services are provided in all spheres of business, ranging from SMEs, joint ventures, consulting firms, internet services, transport, tourism, social welfare, telecommunication services and so on. Therefore, from a broad perspective, an aggregate of these services by individual companies serves as a major catalyst for economic growth and industrial development in any country. Statistical evidences reveal that the bulk of revenues of GNP of advanced industrialized countries come from the production, distribution and trade of services.

The concept remains relatively unexplored and need of further discussion and investigation by analysing the

service innovation research which is increasing compared to product innovation (Ostrom *et al.*, 2010; Page and Schirr, 2008). Toivonen and Tuominen (2009) also supported that the approach service innovation field is becoming broader, expanding and the existing information base can be reviewed systematically and urgently needed (Gallouj and Windrum, 2009). Changes in regulations has occurred across countries and economies in the past three decades, industries such as telecommunications, banking services, air transportation and health care which is synonym among the players in new industries especially in the information and communication technology field (Rust and Thompson, 2006; Fisk *et al.*, 1993). However, service innovation also looking forward to become extraordinary through integrated products and new services that increasingly appears in manufacturing firms which is known as service bundles (Chae, 2012; Kindstrom *et al.*, 2010; Ulaga and Reinartz, 2011) and as part of problematic solution or choice of element. With role in sustaining firm market share, competitiveness across the industry, developing that occurs between service sector and service innovation in production line as traditional boundaries (Barcet, 2010; Bryson, 2010; Gallouj and Djellal, 2010). Technological development is continuous and accelerating and seems like differentiate

and separate between manufacturing and service industry which contributes to produce more service innovation and generate service growth.

Telecommunication industry in Malaysia started with the establishment of Telekom Malaysia or currently known as TM which introduced mobile services into Malaysia in 1985. Malaysia's telecommunication develop the market and start operation in 1989 when Celcom launched service and joined the industry. Since then, the government focused, invest and enhance the telecommunication industry which reflect in Malaysia Plan's budget since then. The market was further opened from 1993-1995 when additional companies were granted various operating licenses such as mobile cellular, fixed and long distance as fair competition among mobile service provider. In Malaysia, there are four prominent telecommunication companies which are DiGi, Maxis, Celcom and U-mobile that compete among each other and create a competitive market and environment in the telecommunications industry.

These few companies' core business is segmented to the Malaysia telecommunication market, the broadband markets and also mobile markets. Plus, these companies are offering the promotional price in order to attract the customers. Besides, the telecommunication companies also provide mobile services such as Short Message Service (SMS), Third Generation known as 3G or the latest 4G that enable the customer to connect with a video call, Wireless Application Protocol (WAP) and subscription services. Now, there is an aggressive competition among these companies which leads the company to figure out the factors of playing a vital role to compete in the telecommunication industry.

Research questions: The framework for this study was based on the theory of service innovation (Besant, 2011). In addition, the current study extended customer perception as a mediating role between service innovation and competitive advantage. Furthermore, as one major contribution to knowledge, the current study incorporates mobile service provider in Malaysia. Therefore, this study looked for the answers to the following research questions:

- What are the factors of service innovation that affect organizational competitive advantage
- What are the specific factors affecting the consumer's involvement in service innovation? Do the consumer's involvement influence mobile service provider services

- What are the service innovation critical factors towards organizational competitive advantage? Do system, process, tools or technology organization and strategy affect competitive advantage
- What are the differences of service innovation management practices in service mobile provider companies

Research objectives: This research tries to add to the body of knowledge in the area of service innovation. It investigated the abovementioned factors that may affect customer perception towards organizational competitive advantage in mobile service in Malaysia. Specifically, the principal objectives of this study are:

- To identify service innovation management factor that leads to organizational competitive advantage
- To evaluate the mediating effect of customer involvement in relationship between service innovation and organizational competitive advantage
- To measure service innovation management critical factor towards organizational competitive advantage
- To analyze the differences of service innovation management practices in mobile service providers Malaysia

Thus, the research objective is the aims for constructing the research framework as illustrated in the next study.

Literature review: Now a days, development of innovations within literature on service innovation which involve numerous factors that contribute to the existing literature. The agreement amongst research groups that develop service innovation is important and contribute in many ways in this field. To develop service innovation together, a service innovation network is formed where people can work together and gain access to new ideas and knowledge. When talking about service innovation, we will revolutionise traditional organisational boundaries in this collaboration. The following below are some of the important points to highlight in the service innovation.

System: System innovations refer to disordered old systems that create new players and new markets while marginalizing old ones, successfully implementing and adapting to the innovation while delivering dramatic value to stakeholders (Hamel *et al.*, 2001). The source of information can be gain through specific software in innovation which are providing frequently updated real-time databases, provide adequate information and can be expected to deliver and improve service innovation (Tether, 2005). Besides these direct effects, to realize some

organizational enhancements system in general might also indirectly increase innovation activity as the system applications will help and proven to facilitate the generation of more innovations. Thus, we can generate the new information and knowledge faster by connecting to other units or departments in organization. Tsai (2001) agreed that the profit oriented unit in organization can become more innovation when centralized network is take place.

Proposition 1: The more integrated the development system with customer involvement in mobile service provider is, the higher of organizational competitive advantage.

Process: Toivonen and Tuominen (2009) deduced than service innovation proceses are closely related with supplier client interface and actual service delivery process. What this means is that service innovation processes can be developed starting by addressing opportunities or obstacles faced by service front liners and customers. Therefore, service suppliers also play a key role when using their knowledge and experience in the service innovation process (Koelling *et al.*, 2010).

Proposition 2: The better the implementation of process improvement practices with customer involvement, the greater the level of organizational competitive advantage.

Organization: On a conceptual level as the implementation of concrete and new organizational concepts, it is therefore necessary to understand by measure and monitor the adoption and performance impact of organizational innovations.

The multidisciplinary teams against by Blindenbach and Ende (2010) which involve staff in organization that have different area of expertise in service innovation process especially those who involve in organisational project. On the other hand, innovation capability of an organization according to De Castro *et al.* (2013) depends closely on organizational assets that include knowledge, intellectual and the worker o staff which can utilize the assets in terms of knowledge and information. Noruzy *et al.* (2012)'s research identify that learning and knowledge in organization can directly impact organizational innovation while organizational innovation and organizational learning can directly impact organizational market share or performance.

Proposition 3: The greater the level of cross-functional organizational practices with customer involvement, the higher the level of organizational competitive advantage.

Tools/technology: In the same spirit, tools or technology can be medium link or interaction with customer involvement through dialogue discussion, users panel, create experimentation team with the staff and prototyping and some other tools for generate the new service in innovation that fulfil customer needs and wants (Hertog *et al.*, 2010). Besides, brand the innovation in interaction with customers, Halliday and Trott (2010) also point to the needs of customer in new service offering by the company must pay attention to details and understand them. Information technology can impact the effectiveness of existing services as mentioned by Licht and Moch (1999), in particular timeliness, convenience and customer service. In addition, the complementary innovations isclosely linked to the productive use of IT (Hempell, 2005).

Proposition 4: The better the level deployment of innovative tools/technology practices with customer involvement, the greater the level of organizational competitive advantage.

Strategy: More significant firm resourcesalso involve in service innovation which means that business direction and issue in company regulations are becoming attention in research field (Hertog *et al.*, 2010; Gallouj and Windrum, 2009; Toivonen and Tuominen, 2009). Different types of innovative strategies in service firms is previous research concerns. Although, service development in every service company is different in terms of implementation of service innovation, theinternal success factor for service innovation contributes and proof to be business direction factor by market development (Riel *et al.*, 2004). Therefore, encourage the organizational environment which favours collective and exchange of information in relation to the customers as well as their requirements, needs and wants.

Proposition 5: The greater the level of strategy organizational practices with customer involvement, the higher the level of organizational competitive advantage.

Customer involvement: Criscuolo and coauthors argue that established upstream or downstream contacts to customers and suppliers leads the firms generate more innovations. The enhancement and advancement of services suppliers who is also can be a customer in service innovation which can deliver crucial source of information and generate new idea. The benefits and dynamics of involving different factors in the service innovation process also includes in a number of articles

investigate which focusing on the telecom and IT service sectors that stated benefits of involving customers (Kristensson *et al.*, 2008; Matthing *et al.*, 2004; Magnusson *et al.*, 2003). In addition, Kanstrup and Christiansen describe how customer “discourse” has gradually changed from “victims” needing support in the 1970s to “competent practitioners” in the 1980s, to “serious professionals” in the 1990s and to a “valuable source of inspiration” today. Meanwhile, Heiskanen and coauthors elaborate on how customer can point out issues on user acceptance of the technology and also the practical use and usage conditions of that technology. These issues not only recognize risks and create business but also can form the service innovation. According to Rohracher (2005), diffusion of technologies and innovation is growth parallel by each other. Meanwhile, customer role not only specific in terms of involvement in service innovation process and design but the customer role is diversify by transform socio-technical system. Mutual adaptation and co-development not only occur in organization and technology but also between customer experience and service. In addition, Meiren and Burger (2010) points out that potential customer and user can test new service and concept develop by the organization through immersive multimedia. The degree relationship between service provider and customer is more important than products that leads to customer contributions of ideas (Matthing *et al.*, 2004).

Competitive advantage: Both service and production line firm can achieve competitive advantage during the multidimensional phase by giving attention to service innovation (Gremyr *et al.* 2010; Kindstrom and Kowalkowski, 2010). Tidd *et al.* (2007) mentioned that competitive advantage also can be identify by several elements in service contributions. Jay Barney stressed on internal dimension which include firms resource and their role in competitive advantage and its sustainability. Moreover, Barney (1991) suggests that resources of firms are key players in providing sustainable competitive advantage.

According to Barney (1991), for the firm with the pre-requisite of heterogeneity and imperfect mobile resources among competing firms could generate sustainable competitive advantage which include valuable, rare, imperfectly imitable and imperfectly substitutable resources. In 1985, Porter also mentioned that understanding resources of sustained competitive advantage for firms has become a major area of research.

Service innovation theory: In the last decade, the research on service and service innovation achieved impressive

progress. From the 1970s onwards, technology innovation has create attention researcher and leads to in increasing research in that area. Pavitt (1984) introduced service oriented sector which is known as one of service industries in his sectorial taxonomy of technological change.

Similarly, according to Barras (1986, 1990) the important theoretical contributions of portrayal in most service sectors is to begin steps of service process as supplier-dominated receive an impetus from manufacturing. Thus, there are two significance results from service innovation research which is develop dynamically. The first results is participant from the study take active participation and leads to contribution of service innovation processes.

Moreover, recognition of the importance of non-technological elements of service innovation is somewhat moderated in terms of technology innovation elements. This has resulted in a better understanding during customer discussion session and ability of the customer by Kline and Rosenberg in 1986, the importance of recombination of existing elements in new services (Henderson and Clark, 1990) service management (Norman, 1991; Quinn, 1992) and the peculiarities of services (Miles, 1993). Gallouj and Djellal (1997) finalize a total of six innovation models that describe service innovation as a whole. They identify the elements between improvement innovation, radical innovation incremental innovation, formalization innovation, re-combinative innovation and ad hoc innovation. Meanwhile, recent development models is networked or linked business models that has received attention from Osterwalder and Pigneur (2010) researchers of the best-selling book Business Model Generation.

MATERIALS AND METHODS

In technology acceptance models, Venkatesh and coauthors aim is to study on how the customer opinion on feedback of reality scenario of information technology. The initial Technology Acceptance Model (TAM) presented by Davis and Venkatesh (2004) elaborate the customer computing technologies and determinants of user acceptance. Perceived usefulness and perceived ease of use are the main conceptual in this model. Moreover, the impact of outer variables on intentions, internal beliefs and attitude can be study by use this model as a tool. This model is not observing the actual implementation but measure the customer perceptions which is reporting their conceptions.

There are essential for service innovation that include collaborative processes with, partners, employees

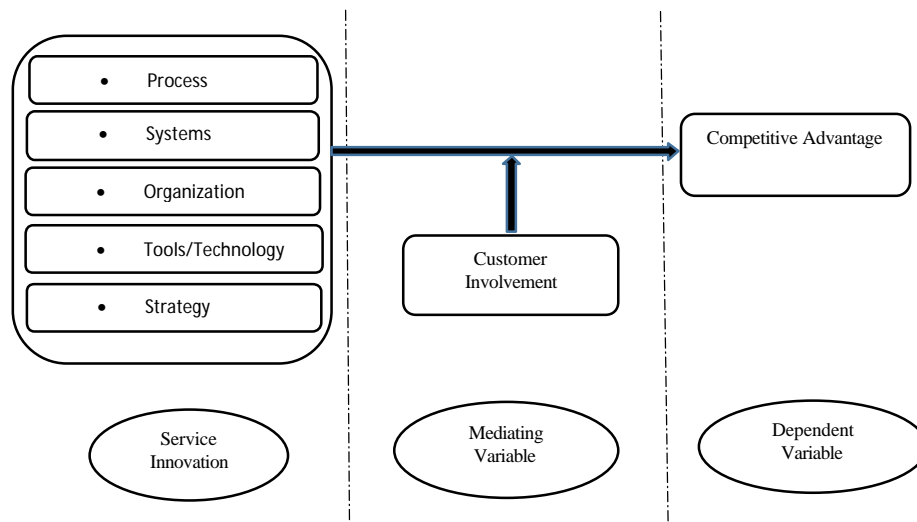


Fig. 1: Research framework

and customers (Chen *et al.*, 2009). Also, Ordanini and Parasuraman (2010) mentioned the customer has high impact on contribution in service innovation compared with critical role of business partner collaboration in radical phase innovation. Thus, collaboration needs within a service innovation team not only important but also between the initiator or innovation team as well as other competences and roles within external collaboration partners and the organization. Furthermore, customer interaction helps shorten development cycle time as suggest by Alam (2006). Chien and Chen (2010) found that customer involvement in financial services industry has positive indicator on New Product Development (NPD) process both directly measured through better cross-functional integration and measured by duration, profit, market share and team performance. R and D people is one of the example of cross-functional integration that get better opportunity to communicate directly with customers.

To impulse innovation in service firm, the need for boundary spanning roles is suggest by Lievens and Moenaert (2000b). As this roles connecting the external information as a solid source to the firm by communicating with internal department units in service innovation. Lievens and Moenaert (2000a) further identified a needs and argued that this ability is hard to duplicate and maintain the position in the market through enhanced learning and cross-functional cooperation. For instance, project managers in service innovation field should implement as alternative solution by create learning-project teams as one of the suggestion. From previous experience, these teams would learn by engaged in service innovation tasks and the experience of other teams previously.

In addition, competitive advantage in several aspects can contributes in innovation (Tidd *et al.*, 2007). New products and market performance has strong interlink which is growth by non-price factors (customer involvement, design, individualisation, quality and others), ability to switch products which also means shorter lifecycles in product line, new products helping to improve profitability, maintain market shares and innovation of processes that lead to speeding up of new product development and shortened production time in comparison to competitors are the most important characteristics of innovations. The essential for creating and sustaining an organization's competitive advantage through developing successful technological innovations as supported by De Castro *et al.* (2013).

Customer involvement to services in other sectors is still new in service innovation development, therefore the general model in service innovation apply based on the conceptual model. Thus, distinguishing manufacturing functions and service is increasingly artificial. In order for all industries to achieve competitive advantage, service elements has become crucial point to all industries to increase the market share and to stay competitiveness.

Research framework: Many study of service innovation has attracted researchers as well as practitioners. Based on the literature review from past studies, there are many angles of service innovation issue. The factors in development of service innovation is solely base on the researcher point of view. Organizational performance is one of the factor in service innovation that attracted many researchers in the previous studies. Based on Fig. 1 the proposed framework of service innovation illustrates the relationship between service innovation (independent

variable) and customer involvement as a mediating effect in achieving organizational competitive advantage (dependent variable).

RESULTS AND DISCUSSION

In this section, we will discuss about the limitation of previous model or theories that shows the research's gap in this study. According to Chen and Li (2010), there is significance impact on individual's intention to accept new technology that they had ignored customer involvement in terms of density stronger or weaker in technology readiness by individual. Therefore, this theoretical gap is identify to conduct the current research and most of service innovation studies were conducted in develop countries which leads to rationale behind the development of new model in this study. Moreover, all potential factors that include customer involvement element which is inspired the idea of developmental this comprehensive model.

Contributions is important from both industries level include service and production line levels. Competitive advantage and economic growth is an important driver of contributed within service innovation and this perceptive is general topic in this field. Therefore, product differences or similarities is became less important but the attention has shifted to feedback of customer needs and market dynamics that recognize as assimilation (Sicotte *et al.*, 2008) and demarcation (Pires *et al.*, 2008) viewpoints remained, though neither dominated.

From the practical perspective, service mobile provider's managers and other decision makers in the telecommunication sector need information about how customer involvement relates to service innovations, in particular, service mobile providers. The current study provides a comprehensive acceptance model to the managers to understand customers' perceptions and the factors that influence the competitive advantage. Based on these factors, the managers will be able to develop a better understanding and build a strategy to link the relationship with customers. Therefore, the findings of this study could provide an initial base for the managers to explore the factors that determine the customer involvement of service innovation. In addition, the current study shed light on the relationship service innovations and competitive advantage thus, allowing managers to obtain better understanding of factors affecting customer's involvement in mobile service providers. Consequently, the current study's findings could provide a broad database that forms a strong foundation for the managers to determine the incentives of the customers and to design appropriate organizational strategies and marketing plans to encourage and convince customers to get involved in service innovations.

Specifically, the managers could encourage the use of SPOTS Model by strengthening positive process drivers (service innovations dimensions). Based on the understanding of technology readiness and the traditional variables in the research model, the managers will be able to design an appropriate organizational strategy to motivate and encourage the customers in the development of service innovations.

Last but not least, the results from this study will be benefit for both managers and researchers since the customers in developing countries is facing the same circumstances or situation as Malaysian customers when firm start introducing customer involvement element in service innovation.

CONCLUSION

The involvement of customer involvement is a new topic in service innovation practices on mobile service providers. Therefore, this study projected to produce result that to give implication to organizational competitive advantage, improvise telecommunication industries as a whole and increase effectiveness of service innovation in Malaysia. Also, this study developed a new model based on SPOTS Model, including all important variables from previous studies. In addition this study adopted SPOTS Model from previous studies as a basis of important variable to implement new construct that introduce the mediating variable which is customer involvement between relationship service innovation and competitive advantage. Furthermore, to the researcher's best knowledge, there is a lack of prior empirical studies that has investigated the effect of customer involvement on the relationship between service innovations and competitive advantage on mobile service providers. Therefore, more academic attention should be paid to the study which helps to understand the potential factors that may motivate or impede customer's involvement in development of service innovations.

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