

Framework To Enhance The Performance To Gain Market Through Innovation As A Mediator In The Mobile Cellular Telecommunication Industry Of Pakistan

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Abstract: In today's Pakistan, mobile service providers play a critical role to develop digital Pakistan by introducing new business-like digital banking, IoT, electronic-health, electronic-medicines, virtual realities, and e-commerce. This research explores how market orientation and knowledge sharing affect the performance of an organization to use mediator, which is innovation. The study focuses on the mobile cellular industry of Pakistan, comprises of four companies that are Ufone, Telenor, Mobilink, and Cmpak. A few mobile companies are losing the market in competition due to a lack of innovation. Therefore lack of innovation in developing a new product, the process to modify a service into quality one identify a problem. The focal area of this research is the mobile telecommunication industry of Pakistan; a population of this mobile sector is four, N = 175 respondents, including senior managers, managers, assistant managers, and team leaders from different departments involved in innovation and growth of the company. This study is conceptual and aims to explore how market orientation and knowledge sharing influence on performance through a mediator such as innovation.

Index Terms: Innovation, mobile telecommunication, market orientation, knowledge sharing and performance.

1 INTRODUCTION

Telecommunications — literally distant communications — adapts the fundamental dimensions of human existence to space and time barriers in principle (Abler, 1977). They connect the people who are living in different places, cities, and countries in real-time with a negligible delay. People exchange information through an optical fiber cable, copper, microwave, and satellite carriers. Telecommunications is merging with media-related technologies and computer as digital technology and is diffusing into a large capacity of workplaces, institutions, hospitals, transportation, machines, infrastructure, and homes. According to William Melody (1986), "information gathering, processing, storage and transmission over efficient telecommunications networks is the foundation on which developed economies will close the twentieth century". The Telecommunication sector plays a vital role in the economy of Pakistan by contributing directly or indirectly in attracting investment, financial inclusion, providing opportunities for innovation, and employment generation. Four mobile service providers in Pakistan are Ufone, Telenor, Mobilink, and Cmpak. Out of these four, three are multinational. According to Pakistan Economic Survey 2018 - 2019, telecom operators have invested about US\$ 200.1 million from July to March 2018. The cellular mobile sector is the main driver behind the investment of US \$ 158.3 million during the first two quarters of the financial year 2018 to 2019. After the commercial launch of 3G, 4G, and LTE services, new streams of revenue have opened for mobile service providers. The telecommunication sector has portrayed a critical part in the overall economy of Pakistan, and in between the financial year of 2017 to 2018, the revenues stood at Rs. 488.8 billion. According to the PTA report (2018), the total number of mobile subscribers has shown in figure 1, whereas the number of broadband subscribers stands at 68.24 million.

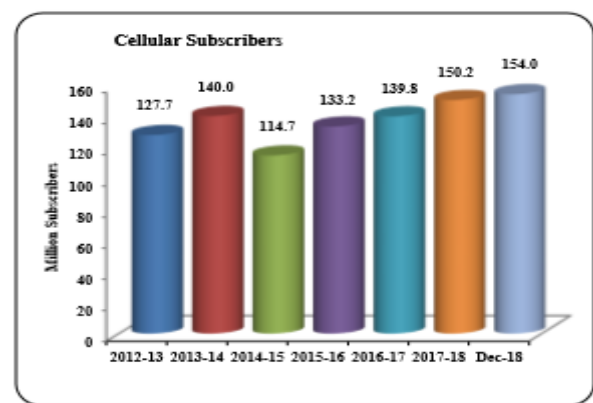


Figure 1. Mobile Cellular Subscribers

1.1 Problem Statement

Four cellular mobile service providers in Pakistan are Ufone, Telenor, Mobilink, and Cmpak. According to PTA annual report 2018, these cellular mobile service providers are holding the market shares for the year 2017 and 2018, as per below in figure 2.



Figure 2: Mobile Subscribers and Market Share 2017 & 2018

As per detail in figure 2, the number of subscribers of each mobile service provider is increasing yearly, but an unusual situation is related to market share. A few mobile operators like Telenor and Ufone losing the market, whereas Mobilink and Cmpak are leading the market. The primary cause for market loss is the lack of innovativeness in terms of products, processes and services, limited network coverage, poor voice/data services, and investment in infrastructure buildup to support advanced technology services. Therefore lack of innovation identifies a significant problem to lose the market in competition.

1.2 Conceptual Framework

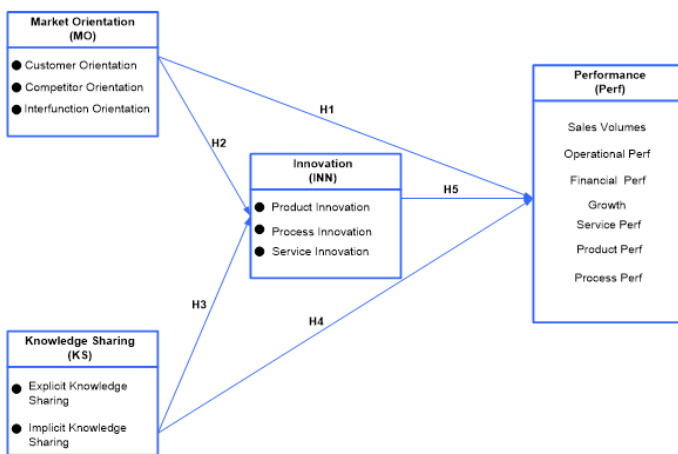


Figure 3: Theoretical Framework to Enhance Performance

2. LITERATURE REVIEW

2.1 Performance (Perf)

Performance of an organization is a critical variable in the field of research management, and it has acquired much attention of researchers (Kirby, 2005). Organizations use different kind methods for the evaluation of their performance. Performance can be assessed both ways financially and non-financially (Darroch, 2005; Bakar and Ahmad, 2010). The majority of the organizations choose financial indexes like net profit, return on assets and investment to measure performance. There are some flaws to calculate the performance of an organization to use financial indicators such as neutrality and limited precision. Therefore, many of the scholars contribute to use non-financial parameters and financial methods both to assess performance (Wadongo, Odhuno, Kambona, and Othuan, 2010; Jusoh and Parnell, 2008; Razalli, 2008; Evans, 2005). The long term performance of an organization is to determine how external business environment rewards and internal capabilities perform successfully.

2.2 Innovation (INN)

Innovation defines as the capability of the organization that arranges the resources in combination with capabilities to build value addition to excel in business (Saenz, Aramburu, and Rivera, 2009). According to Thornhill (2006), innovation is the process to create a new idea, the improvement of the

existing process and introduce the new develop product, service or process to market. Innovation is a practice in which modifications had made in the existing process, the product, or service, or to develop new products that increase value to customers. Process innovation defines a method to redesign and refine the operating business of an organization internally that involves technical design, commercial decision and service creation (Freeman, 1982; Cumming, 1998). Process innovation plays a critical role to gain the market share by improving the quality and reduce the operational and production cost, and to attain competitive advantage. According to O'Sullivan and Dooley (2008), service innovation is to create value by doing modifications in the service that is a customer using. There is a need for service innovation since more significant interaction and vigorous requests from customers. Hence organizations consistently execute innovation in product, service and process in order to create quality service to meet the client's requirements. According to Chen (2011), service innovation can be seen as how to enhance the quality and features of service by expanding valuable ideas. In literature, the new product development and improvement in the existing one is mostly associated with product innovation (Chang et al., 2012). Product innovation is an ongoing inter-functional related process in which the competencies and activities from inside and outside of the organizations integrate that creates superior performance. We can say that as a dimension of innovation, product innovation has a powerful influence on performance.

2.3 Market Orientation (MO)

Narver and Slater (1990), describes the market orientation as "the organization culture that most effectively creates the necessary behaviours for the creation of superior value for buyers and, thus, continuous superior performance for the business." In today era of modern and advance marketing, it is essential to understand the requirements of clients in a better way as compared to competitors to win the business, which indicates the importance of the market orientation. The construct market orientation comprises three primary components from the behavioural perspective that are the customer, inter-functional coordination, and the third one is the competitor orientation (Narver & Slater, 1990). The customer orientation behaviour beliefs to put the interest of the customer first by an in-depth understanding of their requirements. In any organization, the inter-functional level coordination leads to creating value for customers. Organizations with a customer orientation approach focus to collect sufficient information about their customer's needs that help to develop new products according to their expectations (Lin et al. 2012, p. 44). Competitor orientation provides an opportunity for an organization to compare and benchmark an alternative service provider (Narver & Slater, 1990; Zhou et al., 2007). By using a competitor orientation approach, the organizations analyze not only the strengths and weaknesses but also the strategies and capabilities of competitors that deliver a similar portfolio. Inter-functional coordination is the process of coordination of organizational activities to create values for targeted customers and other stakeholders (Narver & Slater, 1990).

2.3.1 Influence Of Market Orientation On Performance

Market oriented firms motivate their workers to work together for the common goal to achieve the satisfaction of customers

(Jaworski & Kohli 1993). Employees in the market oriented organizations not only committed but also satisfy from their jobs and improve the performance of an organization (Jaworski & Kohli, 1993). Organizations having a strong relationship with customers collect sufficient information and feedback, which in turn facilitates product development that enhances the performance, competitiveness, and responsiveness. Many empirical studies support the recommendation that there is a significant and strong relationship between market orientation and performance (Pitt, Caruana, and Berthon, 1996; Narver & Slater, 1990). According to Baker and Sinkula (2009), the relationship between market orientation and profitability is positive. From an emerging market perspective, strategies based on market orientation have a significant impact on organizational performance. According to Ramayah, Samat and Lo (2011), the market orientation effect quality of service and firm's performance significantly. We construct the below hypotheses based on the above shreds of evidence.

H1. The market orientation influence the organizational performance positively.

H1a. Customer orientation influence the performance positively.

H1b. Competitor orientation influence the performance positively.

H1c. Inter-functional coordination influence the performance positively.

2.3.2 Relationship between Market Orientation, Innovation and Organization Performance

2.3.2.1 Influence Of Market Orientation On Innovation

Previously researcher inspects the relationship from market orientation to innovation (Atuahene- Gima, 1996; Han, Kim, and Srivastava, 1998). Behaviours in the Market Oriented approach lead to superior innovation and innovation success (Kohli & Jaworski, 1990). Organizations collect information related to current and potential customers through market-orientation behaviour that is a source of ideas that enable firms to develop innovative products through an overall understanding of the market environment. As per research literature, competitor orientation enhances the innovation capability of the organizations (Han, Kim, and Srivastava, 1998; Grinstein, 2008). Firms that are constantly analyzing, tracking, and responding to their competitor's move can develop new and advance technological base, innovative solutions related to the product, process, and service for their valued customers. Choi (2002), investigates a positive relationship among business managers, owners, competitors, and customers. Inter-functional coordination has a powerful effect on innovation (Griffin and Hauser, 1996). Organizations with integration and open communication across different functions create an organizational climate that is more suitable to adopt new perspectives that lead to novel innovation ideas. We suggest the following hypotheses based on above research study.

H2. Market orientation influence the innovation positively.

H2a. Customer orientation influence the product innovation positively.

H2b. Customer orientation influence the process innovation positively.

H2c. Customer orientation influence the service innovation positively.

H2d. Competitor orientation influence the product innovation positively.

H2e. Competitor orientation influence the process innovation positively.

H2f. Competitor orientation influence the service innovation positively.

H2g. Inter-functional coordination influence the product innovation positively.

H2h. Inter-functional coordination influence the process innovation positively.

H2i. Inter-functional coordination influence the service innovation positively.

2.3.2.2 Relationship between Innovation to Performance

Schumpeter (1934), introduces the concept of how to innovate a product or process. These both innovations improve organizational performance to reduce the cost through the process of innovation in developing new products. The empirical study of Kotabe and Murray's (1990), concludes that more efforts an organization put in process innovations result in the higher level of product innovations, which results in higher market performance. From a literature perspective, service innovation helps an organization to achieve better performance (Grawe et al., 2009; Prajogo & Ahmed, 2006). Organizations execute service innovations after getting requests and feedback from valued customers. Service innovations happen when organizations modify the existing services based on requests received from customers. As per above shreds of evidence, we suggest the following hypotheses.

H5. Innovation influence the performance positively.

H5a. Product innovation influence the performance positively.

H5b. Process innovation influence the performance positively.

H5c. Service innovation influence the performance positively.

2.3.2.3 Impact of Innovation towards the relationship between Market Orientation and Performance

As per Bozic (2006), by continuously analyzing the competitor's move and strategies, an organization can generate better new ideas to develop innovative solutions to offer new products, gives an environment for critical activities within an organization that result in innovation and better performance. The market oriented organizations use their

abilities to bring and commercialize new products to markets more effectively to enhance performance (Gatignon & Xuereb, 1997). Hence market-oriented firms accumulate sufficient information about clients and then execute the modifications in the existing services and products to create values for customers. These newly value additions attract customers and boost the performance of organizations. Therefore based on the above pieces of evidence, we formulate the below hypotheses.

H2j. Product innovation has a significant mediation effect on the relationship between the customer orientation and organizational performance.

H2k. Process innovation has a significant mediation effect on the relationship between the customer orientation and organizational performance.

H2l. Service innovation has a significant mediation effect on the relationship between the customer orientation and organizational performance.

H2m. Product innovation has a significant mediation effect on the relationship between the competitor orientation and organizational performance.

H2n. Process innovation has a significant mediation effect on the relationship between the competitor orientation and organizational performance.

H2o. Service innovation has a significant mediation effect on the relationship between the competitor orientation and organizational performance.

H2p. Product innovation has a significant mediation effect on the relationship between the inter-functional coordination and organizational performance.

H2q. Process innovation has a significant mediation effect on the relationship between the inter-functional coordination and organizational performance.

H2r. Service innovation has a significant mediation effect on the relationship between the inter-functional coordination and organizational performance.

2.4 Knowledge Sharing (KS)

The knowledge that exists either implemented in the evolution of new technology or human capital perform a critical role in the improvement of economic. (Leydesdorff, 2010). From an organizational perspective, knowledge defines how to use and utilize information. Knowledge is always a primary tool to generate wealth for an organization. The knowledge sharing performs a primary part in contributing to the product and process development. In addition to the growing contribution of literature, more study requires to understand what are how knowledge sharing can be a prerequisite to accelerate the performance of an organization (Hallin & Marnburg, 2008; Finnegan & Willcocks, 2006). Hence knowledge is identified as the primary differentiator and after sharing become a critical tool for accomplishing competitive advantage for any organization. There are several forms of knowledge by nature,

such as the tacit and explicit form of knowledge (Anasi, 2014). The tacit knowledge sharing is personal, and context-specific that cannot be shared through conventional tools such as processes, documents and databases (Nonaka & Takeuchi, 1995; Kreiner, 2002) whereas the knowledge form that is explicit can be shared and expressed in numbers, symbols, and words that can store in database and can be transmitted within an organization (Joia & Lemos, 2010). The organization should encourage knowledge sharing so that ideas generate from collective wisdom become a foundation for the development of new products.

2.4.1 Relationship between Knowledge Sharing to Performance

Both forms of knowledge sharing, either it is tacit or explicit increase the thinking capability and understanding to encourage knowledge creation and ideas that play a vital role in making critical decisions and influence the organizational performance (Reychav, 2009). The knowledge sharing gives birth to better and new innovative ideas that will enhance the quality of existing products, processes, or services that result in better performance of a firm. The tacit knowledge sharing can determine the performance of the firm as a whole (Anh, 2006). Within an organization, explicit knowledge transfer sharing improves the effectiveness and operational efficiency (Wang, 2012). In any organization, the determination of organizational learning can be the sharing of knowledge brings many advantages to an organization through the achievements of organizational goals (Down, 2001; van Woerkom & Sanders, 2010). Knowledge sharing has different dimensions and play critical roles in different ways to improve performance (Du, Ai, & Ren, 2007). Therefore based on the above study, we propose hypotheses such as.

H4. Knowledge Sharing influence the performance positively.

H4a. Tacit Knowledge sharing influence the performance positively.

H4b. Explicit Knowledge sharing influence the performance positively.

2.4.2 Relationship between Knowledge Sharing, Innovation and Organization Performance

In any organization, the activity related to knowledge sharing is tacit and explicit that enhances understanding of market and innovation activities (O'Donnell, 2003; Hong, Koo and Suh, 2009; Hong and Koo, 2011). Organizations that are practising the knowledge sharing process can develop the new and advance business opportunities through new concepts generated and so result in innovation activities in terms of product and processes. Both tacit and explicit elements of the firm's knowledge play a critical role in the innovation (Taminiau, Smit, & de Lange, 2009; Xie, Wang, & Wu, 2008; Xu, Houssin, Caillaud, & Gardoni, 2010; Haindl, 2002). After getting feedback from customers, better improvements can be implemented to improve existing products, processes, and services via ideas generated through knowledge sharing among employees of an organization. Many scholars have empirically tested the relationship exists between knowledge sharing and different aspects of innovation (Lee, Ooi, Tan, and Chong, 2010; Brockman and Morgan, 2006; Leiponen, 2006; Hall and Andriani, 2002; Liu, Chen, and Tsai, 2005).

Knowledge sharing is perceived as a mechanism that permits the transfer of knowledge between employees that has new values and ideas and enables innovative practices. We suggest the following hypotheses based on the above shreds of evidence.

H3. Knowledge Sharing influence the innovation positively.

H3a. Tacit Knowledge sharing influence the product innovation positively.

H3b. Tacit Knowledge sharing influence the process innovation positively.

H3c. Tacit Knowledge sharing influence the service innovation positively.

H3d. Explicit Knowledge sharing influence the product innovation positively.

H3e. Explicit Knowledge sharing influence the process innovation positively.

H3f. Explicit Knowledge sharing influence the service innovation positively.

2.4.2.1 Effect of Innovation towards the relationship between KS and Performance

In an organization when knowledge share among the employees, it encourages creative thinking and innovation (Hong et al., 2004; Apostolou et al., 2008) in the form of products, processes and services, creating an environment that support to develop an information system for making a wise decision (Kearns and Lederer, 2001), improving performance of the organization (Ruhi, 2003; Lin, 2007; Wang, 2009). In the organization, information sharing among employees generates new creative ideas that lead to outstanding products, processes, and services that will help achieve organizational performance and assigned targets. Organizations possess strong capabilities of knowledge sharing can build better reputations in the business (Ritala et al., 2015). Such a reputation helps organizations to build more potential business relationships and enhance their performance by increasing sales, growth, and customer satisfaction. Hence based on these pieces of evidence, we propose the following hypotheses.

H3g. Product innovation has a significant mediation effect on the relationship between tacit knowledge sharing and organizational performance.

H3h. Process innovation has a significant mediation effect on the relationship between tacit knowledge sharing and organizational performance.

H3i. Service innovation has a significant mediation effect on the relationship between tacit knowledge sharing and organizational performance.

H3j. Product innovation has a significant mediation effect on the relationship between explicit knowledge sharing and organizational performance.

H3k. Process innovation has a significant mediation effect on the relationship between explicit knowledge sharing and organizational performance.

H3l. Service innovation has a significant mediation effect on the relationship between explicit knowledge sharing and organizational performance.

3. METHODOLOGY

This research work proposes a quantitative design. The primary tool used for the measurement of the proposed framework is the questionnaire survey. The population composed of four cellular mobile telecommunication service providers of Pakistan that are Mobilink, Ufone, Telenor, and Cmpak. The sample size for this research consists of 175 respondents from the relevant mobile service providers. These respondents include senior managers, managers, assistant managers, and team leads from the departments, which are the stakeholders for innovation in terms of new processes, products, services, and propose improvements in the existing product, process or service. The relevant departments are marketing, planning, strategy, product development, commercial, and customer care. This study proposes demographic analysis and SEM modeling techniques for data analysis, and reflective formative models for measurement. The software tool recommended for this simulation is PLS SMART.

4. CONCLUSION

The primary focus of this research to understand the concept of innovation, conversion of new ideas into product, process, and service by keeping in view the era of digitization and technological changes in the business of cellular mobile communication. Many of the previous researches either the emphasis on one or two dimensions of market orientation and knowledge sharing or used construct as a whole in their framework models. Also, most of the literature has evaluated and empirically tested the direct relationship and influence of market orientation and knowledge sharing with innovation and performance respectively. In contrast, this work tried to cover this gap using innovation as the mediator between knowledge sharing and organizational performance, also market orientation and performance through innovation as well. This kind of research has never executed before among the mobile cellular companies in Pakistan. The execution of this study is to fill this gap.

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