

Impact of Multi-Dimensional Service Innovation on Performance of the Banking Services

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ABSTRACT

This causal study empirically examines the impact of multi-dimensional Service Innovation (SI) based on New Service Offering/product (NSO), new service process (NSP) and New Service Business Model (NSBM) on performance of banking services from a developing country context in the face of business environment (BE) characterized by dynamism and competitiveness. It employs quantitative data gathered through cross-sectional self-administered survey questionnaire on a 5-point Likert-type scale from a sample of 220 managers from the banking organizations to predict the impact of multi-dimensional service innovation on performance. Data are analyzed statistically through SPSS-19 and Amos-18 by means of bivariate correlation and regression. Results indicate a strong impact of multi-dimensional service innovation on performance. Each dimension of service innovation significantly predicts service innovation performance. Business environment theorized in terms of competition and uncertainty fails to moderate the relationship between service innovation and performance. In this way, this study offers many valuable insights in the field of service innovation and performance management areas which can be valuable to several audiences such as researchers, practitioners and policy makers in developing service innovation strategies to augment performance. It is a fresh addition to literature and contributes both theoretically and practically.

Keywords: Service Innovation, performance, business environment, service sector

INTRODUCTION

Services and innovations in services are considered as one of the key economic developmental drivers and engines of growth (Morrar, 2014). Countries historically recognized as industrial economies dominated by manufacturing sector are transforming and increasingly relying on services (Hsieh et al., 2013). Services now dominate the developed economies (Wang et al., 2015) with the share of up to 70% in GDP of OECD countries which is still on rise (Gallouj & Windrum, 2009). Service innovation is being acknowledged for bringing economic well-being and growth (Gallouj, 2002) and may have a positive impact on the whole economy (Awais & Tipu, 2011). Innovation is central to the existence and growth of any organization (Agarwal, Krishna, Erramilli, & Dev, 2003) or a country. It is recognized as a strategic driver of economic growth and performance, competitive advantage, and even survival (Durst, Mention, & Poutanen, 2015; Merrilees, Rundle-Thiele, & Lye, (2011). There is dearth of empirical research in the realm of service innovation and its likely impact

on performance compared with product innovation and many researchers have identified several gaps in this regard. A review of literature on service innovation points out that this area although on the rise is still under-researched (Asad, Sharif, & ALekam, 2016).

According to Jansen, (2006) despite their massive socio-economic relevance, services and service innovation are under-researched phenomena.

In words of Durst et al. (2015), "even though there is a mass of contributions discussing the relevance of innovation management in general, the opposite seems to be true when we consider the aspect of service innovation measurement and performance, there is a lack of research". According to Chen, Tsou and Ching (2011), despite appeals for more research in this area, a service-related research gap remains mainly in the realm of service innovation. Further evidence thus needs to be gathered and understood in order to make development in this field (Rubalcaba, 2012). According to Droegge, (2009) the classic product/process dichotomy is doubted to fully encompass service innovation and discovering distinctive dimensions of service innovation is the key opportunity in service innovation research (Haider, Asad, Atiq, & Fatima, 2017). This scenario creates dissatisfaction amongst researchers and practitioners which resultantly motivates us to explore this area. Additionally, there is theory/practice gap which needs to be bridged. This study aims to empirically predict the impact of new service offer/product, new service process, and new service business model on performance of the banks in the context of a developing country.

LITERATURE REVIEW

Innovation has been defined in various ways by different researchers. Perhaps the best description of innovation was put forth by Rogers (2003) as any new idea, new action, or new artifact seen novel by a person or entity. According to Rogers (1998), innovation is the process of developing idea and commercializing or extracting benefit out of that. Du Plessis (2007) defines innovation little differently, according to whom, it is the creation of new knowledge and ideas to materialize business outcomes with the aim to improve in-house company processes/structures and to craft market-oriented goods and services. According to Durst et al. (2015), service innovation is innovation being carried out in diverse scenarios of service sector that encompasses developing entirely new services or gradually improving existing services. Rubalcaba et al. (2012) define service innovation mainly from manufacturing-sector perspective. According to them, it is innovation by a business firm in services as typified by the development of service

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strategies in manufacturing. Ostrom et al. (2010) present an all-encompassing approach to define service innovation. According to them, it is the creation of worth for consumers, human resources, owners, allies, and society through novel and improved service products, service processes, and service business model. Forfas (2006) proposed a multi-dimensional framework for service innovation consisting of three dimensions: service product innovation, service process innovation and service business model innovation (Haider, Asad, & Fatima, 2017). Among others, these three basic dimensions have been widely discussed in literature.

The framework by Forfas was later amended by Voss and Zomerdijk (2007). Interactive relationship between these three dimensions of service innovation is ambiguous as focus of service innovation research has been on new service offering or new service process (Wang et al., 2015). A clear distinction between product and process dichotomy is difficult as service is a process rather than an artifact (Gallouj, 2002). Contrary to the above observation, Droege et al., (2009) explained that a distinction between service product and process is possible and these two are separate dimensions.

This confusion about product/process dichotomy is since both are carried out together and are very closely related to each other (Uchupalanan, 2000). Very often, a change in the process requires a corresponding change in product and a change in product requires process to change (Gallouj, 1998) as provision of service is a journey for customers consisting of multiple components and touch points over the period of service provision (Rawson, Duncan, & Jones, 2013). Researchers delineate service product innovation as a novel service offer in response to the need of a customer or market while service process innovation as the introduction of something new in the production service operations to render a service offer (Gopalakrishnan, Bierly, & Kessler, 1999). Boone (2000) defines service product innovation as the innovation of a brand-new service offer which should be new to the organization, market or the industry. On the other hand, service process innovation is defined as the realignment of service delivery channel that might lead to novel approaches to satiate customer needs. Similarly, Zomerdijk and Voss (2011) define service process innovation as either radical changes in the process of service delivery channel which lead to a unique new experience about the service or incremental improvements to the existing service delivery processes perceived new by customers. Damanpour and Gopalakrishnan (2001) investigate the dichotomy and find that service product innovation is more frequently adopted and usually precedes service process innovation in the banking services. They further find that both are combined and occur simultaneously in line with the observation above by Uchupalanan (2000). But Shang, Lin, & Wu (2009) add that service product innovation may be the result of innovation in the service process because service production and delivery are instantaneous. Apart from the above debate on product/process dichotomy, new service business model is usually specifically characterized as a considerable or even a thorough transformation in the ways in

which revenues and profits are earned often accompanied by innovations in organizational arrangements to facilitate this change (Voss & Zomerdijk, 2007). Wang et al. (2015) argue that the evolving acknowledgment of innovation in service business models in the service milieu demands that multi-dimensional service innovation framework should also consider it as the relationship between these three dimensions is not yet clear. According to Droege et al. (2009), the classic product/process dichotomy is doubted to fully encompass service innovation and discovering distinctive dimensions of service innovation is the key opportunity in service innovation research. Service innovation is a multi-dimensional construct Hertog, and de Jong, (2010) which encompassed different approaches and perspectives and is complicated (Rubalcaba, 2012). Like innovation, performance too is a multi-dimensional construct Chenhall and Lansfield, (2007) and has been operationalized in variety of ways, particularly in the context of service innovation.

This multi-dimensional nature of performance is due to the reason that services have specific different characteristics which distinguish them from products. These specificities of services influence the definition and measurement of productivity and performance of service innovation (Djellal & Gallouj 2009). In words of Durst (2015), services are of extremely tailored nature, shaped to customer needs and traditional outdated product-based measurement tools are not appropriate for the measurement of service innovations' impact. Morrar (2014) said "measuring the productivity of immaterial and non-technology-based services might need different methods from those employed to measure the productivity of material and technical activities in the manufacturing sector". Hassan and Al-Hakim (2011) define organizational performance as "the integration between organizational knowledge and innovation competence to achieve positive goals that have been identified previously". According to Pitt and Tucker (2008), "organizational performance is a vital sign of the organization, showing how well activities within a process or the outputs of a process achieve a specific goal". Tidd (2001) argued that while it is easy to understand how innovation contributes to business performance, it is difficult to demonstrate it empirically. A noticeable issue widely discussed in the performance management literature is the measurement of performance, especially the service performance measurement. Previous research took a very narrow focus of performance by taking financial parameters as measures of organizational performance. For example, profitability, gross profit, return on assets, return on investment, return on equity, return on sales, revenue growth, market share captured, sales growth, and operational efficiency Fuentes-Fuentes, Albacete and Lloréns (2004) are traditionally used to exhibit performance. In recent years, various approaches towards performance measurement across variety of disciplines Chenhall and Langfield (2007) have been developed which have added ambiguity in devising measurement scale for organizational performance. In the same vein, with the increasing number of studies on service

management, service performance measurement has gained more specific attention Pawar, Beltagui, and Riedel (2009) and this field has emerged as an important area of research with the growth in service management research (Bititci, 2012). Service performance measurement is regarded as more complicated one compared to the manufacturing context (Pawar, 2009). Therefore, the development of key performance indicators and measurement frameworks for services receives considerable attention (Tyagi & Gupta, 2013).

No organization can escape from the environment it operates in. External environment is inevitable as well as crucial for organizations whether service or manufacturing as it brings opportunities and threats.

Being such an important factor in the life of organizations, the business environment is taken as a variable that is likely to moderate the relationship between the main variables of this study. For that reason, two measures of the business environment in terms of uncertainty (dynamism) and hostility (competitiveness) were included as moderating variables likely to impact service innovation and organization's performance. Both measures for uncertainty and hostility replicate the study by Jansen et al., (2006). These two variables have shown in the past to be linked with performance (Lee & Miller, 1996). The inclusion of dynamism and hostility in the analysis is even more important given the focus of this study is on the country where business environment is considered as highly dynamic and hostile. The financial sector in the country case is generally one of the most dynamic and competitive sectors. Previous literature shows that the impact of external environment on innovativeness and performance is widely recognized (Zahra & Bogner, 2000). Miller and Friesen (1983), for example, found that environmental characteristics moderate the relationship between innovation and performance. In addition, the literature argues that environmental dynamism and competitiveness are to be expected to moderate the impact of innovation on performance (Lewin, Long, & Carroll, 1999). Environmental dynamism refers to the rate of change and the degree of instability of the environment (Dess & Beard, 1984). Prior research does not only characterize environmental dynamism through the degree of change but also through the unpredictability of change (Dess & Beard, 1984). Dynamic environments may be characterized by changes in technologies, discrepancies in customer preferences, and variations in product demand or supply of materials. Turbulent and changing environments make current products and services outdated and necessitate new ones to be developed (Jansen, Van den Bosch & Volberda, 2005). To restrain this risk of obsolescence, organizations need to introduce innovations that quit from current products, service, and markets. Environmental competitiveness is the extent to which external environments are characterized by intense competition (Matusik & Hill, 1998). It refers to the degree of competition reflected in the number of competitors and the number of areas in which there is competition (Miller, 1987). Competitive environments have been linked with serious pressures for greater productivity and lower prices Matusik & Hill, (1998) that lead to tighter margins

and less organizational slack (Zahra, 1996). Miller and Friesen (1983) argue that extensive risk taking, forceful reactivity, and a strong emphasis on novelty can be hazardous when competitive conditions are becoming more demanding.

THEORETICAL FRAMEWORK

The detailed review of the literature in the previous section reveals that empirical research on service innovation and performance has so far been unable to bring about clear conclusions about whether service innovation really impacts service innovation performance in diverse settings (Rosenbusch, Brinckmann, & Bausch, 2011). This observation by Rosenbusch and colleagues is consistent with the conclusion by Durst, (2015) who very recently reviewed the literature on service innovation and its impact.

Concluded that understanding the relationship between service innovation and performance is underdeveloped. They call for an in-depth inquiry into this potentially promising field of research. There is a dearth of specific industry-based studies on service innovation that might address particular service sectors (Rubalcaba, 2012). It is argued here that service innovation is a process and to measure its real impact on performance, it is necessary to be able to measure the service innovation performance of the process instead of measuring the overall business performance. Oke, Burke, and Myers (2007) were the first to distinguish between service innovation performance and business performance. Outcome level measures such as financial and non-financial measures may predict service innovation performance more accurately than perceptual measures but the issue is that they tend to be innovation specific and not every innovation performance can be measured through these measures (Oke, 2007). The patent, for instance, is a non-financial outcome level measure for service innovation performance but not every new service can be patented, hence innovation performance will not be measured and translated into business performance. To overcome this drawback, some scholars suggest a process approach that measures the performance of the service innovation process through perceptual measures (Asad, Sharif, & Hafeez, 2016). This process approach to measuring the real impact of service innovation performance may be more promising (Durst, 2015). Except for the studies by Oke, (2007) and Yen, (2012), no other researchers have ever tried to distinguish between service innovation performance and business performance, neither have employed the process approach to measuring the real impact of service innovation. In the similar vein, Wang, (2015) empirically tested a typology by investigating the inter-relationships among new service product/offering, new service process and new service business model and pointed out that their mutual relationship is "still unclear". In another study, McDermott and Prajogo (2012) emphasize the need to do considerable work in understanding the underlying relationships between service innovation and performance. Most important observation in this regard was put forth by Ostrom, (2015) engaged in an international interdisciplinary research organized for the purpose of identifying

priorities for service research and pointed out that “understanding the inter-relationships among service product, service process, and business model innovation is one of the five important directions for future research in service innovation” (Ostrom, 2015). In another vein, Carlborg, (2014) carried out a comprehensive review and content analysis of the evolution of service innovation research from 1986-2010 and concluded that “the geographical variety of the empirical studies was limited” on the topic of service innovation. In their review, they also spotted and that majority of the studies on service innovation focused on northern and Western Europe, North America, or Taiwan and emphasized the importance of carrying out service innovation research in developing economies.

This study aims to fill these gaps by empirically analyzing multi-dimensional nature of service innovation and its impact in a developing country context by proposing the following hypotheses and framework presented in Figure 1 based on the literature in the field. Forfas (2006) proposed a multi-dimensional framework for service innovation which was later amended by Voss and Zomerdjik (2007) and tested by Wang et al. (2015). McDermot and Prajogo (2012) in their study kept both dimensions of business environment as control variables. So, the model has theoretical underpinnings based on these studies.

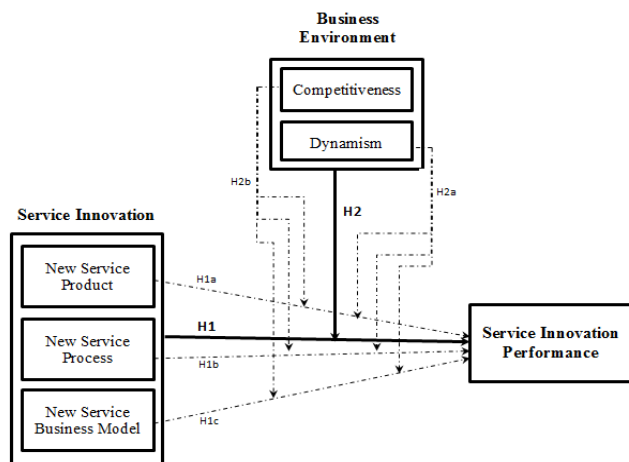


Figure 1: Theoretical Framework

METHODOLOGY

The scope of this study has been kept limited to the service innovations taking place in the banking sector organizations geographically located in the south of Punjab. As per records of State Bank of Pakistan (SBP), there are total 35 different banks with more than 9,000 branches countrywide. Out of them, 5 are public sector commercial banks, 21 are local private banks, 5 are foreign banks, and 4 are specialized banks. For the purpose of this study, public sector banks are excluded from analysis due to their non-market behaviors. Foreign banks are also excluded from the analysis as the research study is limited to the banking sector of organizations with their origins and headquarters in Pakistan. Specialized banks are also excluded

as all the specialized banks are public sector banks. Thus, a total of 21 private local banks is an available population for analysis restricted to geographical boundaries of the south of Punjab having three administrative divisions (Multan, Bahawalpur, and D.G. Khan). Within this geographical region, simple random sampling was applied and a cross-sectional sample of 220 bank branch managers out of 21 private local banks was drawn, keeping in view the research objectives, desired significance level, the statistical technique being employed, cost and time constraints and the size of the population. Business Environment is measured by using the scales developed by Janan sen (2006) and replicated by McDermott and Prajogo (2012). Uncertainty (Dynamism) is measured through a 5-item scale whereas hostility (competitiveness) is measured by the 4-item scale. Yen, (2012) developed measures for service innovation based on the definition of Ostrom, (2010) in terms of three dimensions.

As this study takes into account a multi-dimensional approach to service innovation, thus it employs different forms service innovation may take in any organization. Service innovation may take the form of a new service product/offering, a new service process or new service business model. Hence, in order to grasp the multi-dimensional nature of service innovation, three different dimensions are measured individually by the items developed by Yen, (2012). Each of the three dimensions is quantified separately by a 3-item scale for each dimension. Hence a total of 9-item scale is employed in this study to measure the multi-dimensional concept of service innovation. 7-item scale for service innovation performance measurement is chosen by combining several items to grasp the multi-dimensional nature of it. First four items are taken from the study by Yen et al. (2012) which they adapted from the study of Menor and Roth, (2007). Last three items were taken from Cheng and Krumwiede (2012) who adapted them from Matear et al. (2002) and de Brentani and Kleinschmidt (2004). The measures for service innovation and business environment use 5-point Likert-type scales anchored at strongly agree (5) strongly disagree (1). The measure for service innovation performance also uses a 5-point Likert-type scale but is anchored at very high numerically represented by (5) and very low by (1). Measures to quantify the variables are quite well established in the field of service innovation. Hence, their validity may not be the concern as in words of Sekaran and Bougie (6th ed), “when well-validated measures are used, there is no need, of course, to establish their validity again for each study. The reliability of the items, can, however, be tested”. Pilot testing of the questionnaire was carried out by drawing a sample of 50 managers from the originally chosen sampling frame. Out of the sample of 50, only 29 respondents returned the questionnaire along with their feedback to improve it. Some issues of wording, content, and appearance that arose during the pilot testing were removed in the light of an opinion by experts and respondents. 29 usable responses were entered into SPSS-19 for the purpose of reliability check. All the measures showed high internal consistency with Cronbach alpha beyond 0.7 that Nunnally (1978) recommended.

Cronbach alpha tables for each measure are given in the following tables.

Reliability Statistics	
Cronbach's Alpha	N of Items
.744	5
Reliability Statistics	
Cronbach's Alpha	N of Items
.708	4
Reliability Statistics	
Cronbach's Alpha	N of Items
.728	9
Reliability Statistics	
Cronbach's Alpha	N of Items
.705	7

RESULTS AND DISCUSSION

Survey questionnaire was personally administered by visiting managers from sampled banking organizations located in the three major cities namely Multan, Bahawalpur and D.G. Khan. Out of 220 survey questionnaires administered, 133 usable responses were received with a response rate of 60%. Non-response bias was tested through wave analysis. This analysis checks whether late responses represent non-responses (Rogelberg & Stanton, 2007). Results indicate no statistical differences between the early and late returned questionnaires. This shows that there is no trouble with data regarding non-response bias. Data from 133 respondents were entered into SPSS-19 and analyzed by means of descriptive statistics, correlations and linear regression through SPSS-19 and Amos-18. The coefficient of determination (R square value) which is the goodness of fit of the regression model in this case is found to be 0.214. This implies that almost 22 % variation in dependent variable performance is explained by independent variable service innovation. Standardized regression coefficient (Beta) for service innovation is 0.463 which determines the slope of the regression line and is interpreted as performance would change by over 46% with one unit change in service innovation. The mean values are above 4 suggesting that sampled organizations are innovative, perceive business environment to be dynamic and competitive and have high performance in terms of service innovation.

Table 1: Means, Standard Deviations and Correlations

	Mean	SD	NSO	NSP	NSB	Unc	Comp	SI	BE	Per
NSO	4.25	.530	1							
NSP	4.34	.495	0.3*	1						
NSBM	3.95	.675	0.27*	0.290**	1					
Unc	4.07	.563	0.15	0.25**	0.19*	1				
Comp	4.12	.544	0.15	0.09	0.1	0.46**	1			
SI	4.18	.414	-	-	-	0.26**	0.16	1		
BE	4.09	.479	0.180*	0.178*	0.1	-	-	0.25**	1	
Per	4.11	.421	0.309**	0.25**	0.33**	0.21**	0.19	0.43**	0.21**	1

Note: Significant at: * $P < 0.05$ and ** $P < 0.01$

Bivariate correlations are given above in the table. Service innovation is significantly correlated with both service innovation performance and business environment at 0.01 level of significance. Business environment is significantly

correlated with service innovation performance. So, all main variables are significantly correlated with each other at 0.01 significance level. In the similar way, each dimension of service innovation was significantly correlated with other dimension of service innovation and with service innovation performance. However, correlation between new service offering and uncertainty was insignificant yet positive and correlation between new service process and uncertainty was significant at 0.01. Correlation between new service business model and uncertainty was insignificant at 0.01 but significant at 0.05 significance level.

In the same way, all three dimensions of service innovation were found to be uncorrelated with competitiveness. Uncertainty was significantly correlated with service innovation and service innovation performance but competitiveness was not as shown in the table above.

Table 2: Regression Models

	Model 1 (Baseline)	Model 2 (Multi-dimensional)
Service Innovation	0.000**	
Business Environment	0.490	
Service Innovation		
NSO		0.000**
NSP		0.001**
NSBM		0.000**
Business Environment		
Uncertainty × NSO		0.674
Uncertainty × NSP		0.171
Uncertainty × NSBM		0.747
Competitiveness × NSO		0.101
Competitiveness × NSP		0.191
Competitiveness × NSBM		0.436

Note: Significant at: * $P < 0.05$ and ** $P < 0.01$

Above table shows standardized regression coefficients for baseline and multi-dimensional models. Model 1 shows that service innovation significantly impacts performance at 0.01 significance level which supports our first main hypothesis.

H1: Service Innovation significantly impacts performance of the banking organizations in south Punjab (Supported)

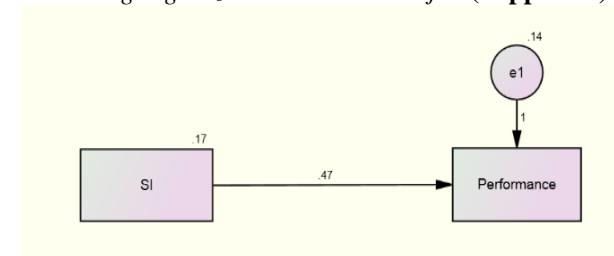


Figure 2: Baseline Model

Moderation analysis in Model 1 was executed by creating standardized versions of each variable in the model and creating a product term for independent variable and moderating variable. This product term was then regressed on dependent variable performance through hierarchical regression by entering independent variable, moderating variable, and the product term in two phases. In the first step, independent variable and moderating variable are entered. In the second step, their product term is entered. Interaction effect of moderating variable business environment is supposed to occur if interaction term significantly regresses dependent variable service innovation performance. But in this case, interaction

term is insignificant which suggests that there is no interaction effect, consequently no moderation has occurred. So, second main hypothesis of the study is not supported by the results as shown in the figure 3.

H2: Business Environment significantly moderates the relationship between service innovation and performance in the banking organizations in south Punjab (**Not Supported**).

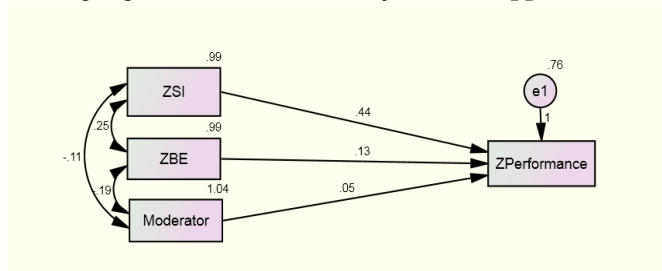


Figure 3: Moderation

To test for the dimension based sub-hypotheses, new service offering/product is regressed on performance and the results show it significantly impacts it. As a result, our first sub-hypothesis H1a was supported.

H1a: New Service Product significantly impacts performance of the banking organizations in south Punjab (**Supported**)

New service process is treated in the same manner and results show that it significantly impacts performance. Therefore, our second sub-hypothesis is also supported.

H1b: New Service Process significantly impacts performance of the banking organizations in south Punjab (**Supported**)

New service business model was accordingly treated and results attest that it significantly impacts performance. Hence, our third sub-hypothesis is supported.

H1c: New Service Business Model significantly impacts performance of the banking organizations in south Punjab (**Supported**)

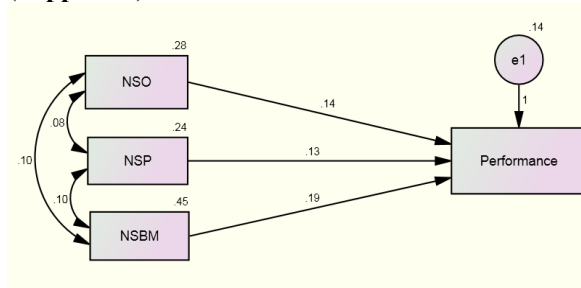


Figure 4: Multi-dimensional Impact of IV on DV

Regression results presented above in the table show that neither of the business environment dimensions significantly moderates the relationship between each dimension of service innovation and performance. Hence no moderation occurs either in baseline model or in inter-dimensional model. So, both sub hypotheses are not supported.

H2a: Uncertainty (Dynamism) significantly moderates the relationship between all three dimensions of service innovation and performance of the banking organizations in south Punjab (**Not Supported**)

H2b: Competitiveness significantly moderates the relationship between all three dimensions of service innovation and performance of the banking organizations in south Punjab (**Not Supported**)

DISCUSSION AND CONCLUSION

This research undertaking offers new insights in the fields of service innovation management and performance management. Multi-dimensional nature of service innovation is highlighted in two stages. The former stage throws light on the relationship between main variables service innovation (IV), service innovation performance (DV) and business environment (MV).

The latter explores these variables further by examining and validating inter-dimensional relationships between these variables. First, this study finds that service innovation significantly impacts performance of the banking sector organizations in the country case which was hypothesized to be so. This finding is in line with the findings of the many studies carried out on service innovation in relation to performance. It reinforces the previous findings that service innovation directly impacts service innovation performance. In the same way, the role of business environment in terms of dynamism and competitiveness was tested which was hypothesized to interact between service innovation and performance. Business environment has shown in the previous researches to interact between innovation and performance.

But contrary to previous studies, it did not interact in our case as reflected by the mean value for the variable which might infer that either service innovation is thought to be an in-house activity with little emphasis to competitiveness and dynamic changes in business environment or managers pay attention to these forces in business environment but are unable to relate them to service innovation activities. Mean values for all three main variables were above four on the scale between 1-5 which suggested that managers emphasized, executed and valued service innovation, perceived business environment to be highly dynamic and competitive and their service innovation performance was good. To delve deep into the mutual and causal relationships between these main variables, their inter-dimensional properties were examined. New services were being developed in terms of new service offering/product, new service process and new service business model but new service business model was relatively less focused than the former two dimensions. This finding is in line with Wang, (2015) who state that both product and process innovations can be combined and occur jointly while business model innovations are complex, difficult to develop and implement and require more resources as compared to product and processes. Hence, new service products and new service process closely resemble in our case. However, all these dimensions were significantly correlated to each other which implied that any new development in any of this dimension tended to positively influence the other dimension. For example, any new service product development would require changes in current processes and business models and vice versa. New processes and new business models will have to be developed to deliver the newly developed

service. In addition, all three dimensions significantly contributed to performance but with varying degrees. Through this finding we can infer that with varying effects on performance, managers can identify which new services are contributing better to performance than the other and more focus can be paid on them. Furthermore, an optimum combination of all three dimensions can synergize performance as all of them significantly impact performance. Thus, service innovation is one of the core contributors to performance of the banking sector organizations in this case.

However, new service business model explained the highest variation to performance which implies that although new business models are difficult to develop and implement but contribute more to performance than the other two dimensions. Both dimensions of business environment were hypothesized to moderate the performance in the light of previous research but in our case, they failed to do so. The results are unusual as one of the two dimensions (dynamism/uncertainty) is significantly correlated to both service innovation and performance but the other dimension is not correlated to both of them. The combined effect of both dimensions does not interact between service innovation and performance. This finding implies that in dynamically changing or uncertain business environment, mutual relationship between service innovation and performance is influenced.

This effect has been offset by in of competitiveness and the combined effect is no interaction. This finding also implies that managers although perceive business environment to be dynamically changing and competitive, but either they cannot relate it to the service innovation activity or service innovation is either sometimes considered as an in-house activity with little attention to forces in the business environment. Hence, overall, we can conclude that service innovation is multi-dimensional as evident by the fact that all three dimensions of service innovation are accomplished and they all contribute significantly to performance. Business environment is perceived to be highly dynamic and competitive but respondents cannot relate it to service innovation activities. This research study offers many valuable implications for both practice and theory. As far as its practical implications are concerned, the findings are important to a wide variety of stakeholders. Governments from the developing countries where services are significant part of their economies can use the findings of this study to formulate policies to innovate their services sectors in order to bring economic growth and well-being. Subsectors with the potential to innovate under broad services sector can be identified where sources can be channelized to innovate and improve performance. For example, the services sector in the country case has reached up to 60% and still many of its service subsectors have the huge potential to innovate. Public services are one such example. By employing findings and insights from this study, performance of the public financial services can be enhanced. Findings can be generalized and extended to other services as well. This research study also bids many valuable implications for managers in the wide variety of service industries and service

organizations. Managers can learn, engage in and choose the optimal combination of various dimensions of service innovation to synergize performance and gain competitive advantage over rivals. They can also learn how different dimensions of service innovation interact and whether dynamism and competitiveness in the business environment play any role in determining the optimal combination of various dimensions of service innovation and in overall performance of organizations. In this way, this study helps business and service managers in their decision making and strategy formulation. On theoretical front, this study offers insightful implications and bridges many gaps identified especially in the fields of service innovation management and performance management.

First, it helps bring some conclusiveness to the impact of service innovation activities as each dimension of service innovation significantly impacts performance. Secondly, it fills the much-needed gap of lack of empirical studies on service innovation in developing economies with increasingly growing service sector in total GDP. There has been a void of studies on this topic in developing countries which might likely be filled with this research endeavor. Thirdly, implications are also important for the theory on inter-relationships among various modes of service innovation as this study helps shed some light on multi-dimensional nature of service innovation. As with almost all the studies, this research study is not free of some limitations. First of all, there is a question of external validity.

More specifically, to what extent the results of this study can be generalized outside the banking sector of the country case and over other developing countries. Sample size was not large enough as there were some budgetary and time constraints which might likely hamper the external validity and generalizability of the results of this study across entire service sector and across developing economies. In addition, respondents were geographically limited to the south of Punjab. All the above factors hamper the generalizability of the findings. Future research can focus on services like hospitality, health, social, tourism, construction, and household etc. Different service innovation models, frameworks, typologies can be applied in various services which can boost the service potential in these sectors. Future research may also focus on development of sophisticated, state of the art, fully-fledged performance measurement and management matrixes to capture the multi-dimensional nature of both service innovation and performance. Cross-cultural and comparative studies across economies and sectors may be productive. Further research on strategy and process for service innovation may provide valuable insights in this area. All these research directions prompt a wide range of stakeholders to turn to this potentially promising area of research to enhance the performance of their organizations and economies and create a competitive and sustainable advantage and welfare for societies they live in.

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