Effects of involving Lead Users and Close Customers in enhancing the process of New Service Development: a Study on Banking Sector

Fraz Muhammad Butt
Foundation University Islamabad

Abstract: *The proposed study was investigate the effects of lead users and relational closeness of the customers in the process of NSD and to see if the new service market performance gets affected due to these two variables with a mediating role of four variables i.e. service advantage, service innovativeness, innovation speed and service newness. A total of 200 responses were used for the analysis of the study. Analysis was done using Simple and Multiple Regression and Baron and Kenny tests. Results indicated that Lead userness and relational closeness had a meaningful connection with new service market performance. Also lead userness positively affected the service advantage, service innovativeness and innovation speed. It was also found that lead userness had a negative effect on service newness. Relational closeness had a positive association with service advantage, service innovativeness, and innovation speed and service newness. Service innovativeness and innovation speed were related to new service market performance. It was also found that service advantage and service newness had no association with new service market performance. Service innovativeness and innovation speed mediated the relationship between lead userness and new service market performance. It was also observed that service innovativeness and innovation speed also mediates the relationship of new service market performance and relation closeness.*

I.   Introduction

With the passage of time market is becoming service oriented, companies nowadays are planning on to bring out new services in the market (Bitner et al., 2000). New service development is gradually increasing and turning into a significant part of industrial approach in both service and manufacturing sector (Menor et al., 2002). Due to this, many researchers and scholars are driving their attention towards the new service development.

Reviews based upon different literatures suggest that specific characteristics of customers are required in developing a new service. According to Olson and Bakke (2001) Many examples from different studies have shown that lead users help managers of the companies on an extensive level in creating a new service. Having a close relationship with the customers is also very beneficial (Alam, 2006). Still they provide firms with different problems as well. For example if the literature on social networks is studied, they tell us that the close relation with the customer may motivate them in cooperating with the firm but at the same time they also are not helpful in providing with a confidential information and data (Krackhardt, 1992). A cooperation of lead user may also result in company poor performance (Enkel et al., 2005). Significant amount study is still required to see the effect of closely related customers and lead users on the market performance of the new service.

Throughout the innovation process, customer's viewpoint and their value must be taken into consideration (Bitner and Brown, 2008). Many evidence have proven that those firms who involve customers in development of a new product are likely to succeed (Alam, 2002; Carbonell et al., 2009; Prahalad and Ramaswamy, 2000; Melton and Hartline, 2010). Looking at the service aspect, involving customers in service innovation is relatively more important than involving them in other type of innovations (Kristensson et al., 2004; Magnusson et al., 2003).

Narver and Slater (1990) argue that when the circumstances change, it is very important for firms to cooperate with customers because customer's needs and preferences may change product market. Rapidness in environmental change is optimistically related with a firm's focal point on learning about the customer's needs and their perspectives (Li et al., 1999). A consideration of customer's concern and upcoming preference may help throw light on future trends (Lin & Germain, 2004).

An important aspect in involving customers in NSD is that firms should involve appropriate individuals for the development. The research investigates the affect of two variables which are lead userness and relational closeness on service innovativeness and new service market performance. This learning studies the mediating effect of four indicators service advantage, service innovativeness, innovation speed, service newness between the customer characteristics: relational closeness and customer lead userness and new service market performance in banking sector.

The main objectives of the research are:

- To identify how customer characteristics and new services market performance are related to each other.
- To find the mediating effect of service advantage, service innovativeness, service newness and innovation speed between customer characteristics and new market performance.
- To study the relationship of customer characteristics: lead userness, relational closeness and four market indicators.
- To study how much effect of service advantage, service innovativeness, service newness, innovation speed has on new service market performance.

From a manager's perspective, results from this learning are likely to give managers an understanding of the efficacy (or ineffectiveness) of involving leading customers and closely associated customers in creating a new service in terms of the betterment of service advantage, service innovativeness, innovation speed, service newness and market performance. As such, conclusion from this investigation should help managers in selecting the customers with right characteristics in developing a service.

II.   Literature Review

Involvement of customers in service innovation has been taken into consideration for a long time now regarding NSD. One important factor in involving the customer in NSD is to select the appropriate customer for product development (Bonner and Walker, 2004; Alam, 2002).An analysis based on the literature suggests that customers to be included in NSD should have particular characteristics. For instance the effective use of lead users in service development should make managers take this factor into consideration (Olson and Bakke, 2001). Another important factor is the close relationship of the firm with the customer (Alam, 2006). Relational closeness and lead users can also be of some problem. Results from different literature on social networks show that they might not provide authentic outcomes (Granovetter, 1982; Krackhardt, 1992). Furhter study is required about their affect on NSD

Studies conducted in the past suggest that customers have a vital role in new service/ product development but more on industrial scale than on consumer level (von Hippel, 1986; Garvin, 1988), the reason probably is that the customization on industrial level is more as compared to consumer level. Sanden (2007) found that the majority of B2C companies did not collaborated with the customers during the development process. According to Pitta and Franzak (1996) companies operating in consumer based markets didn't have access to lead users, also due to retail business it was impossible for the firm to interact with the consumer. In consumer services, there may be chance of interaction between the consumer and the company but there are still some services that focus on technology rather than face-to-face communication with the consumers.(Bitner et al., 2000).

Lead users positively affect in the development of a new service because they can identify the future novel attributes that a product should have depending upon their futuristic approach (Alam, 2006).Well renowned researchers suggest to involve lead users as they provide you better knowledge about the future needs of the consumers Lilien et al. (2002) using the conventional approach. They found that projects involving lead users had more novelty as they provided with more original and new customer needs. Tidd and Bodley (2002) found that for high novelty projects lead userness is considered to be more effective.

It is argued that having a close relation is more efficient in service newness. Close relation helps in creating a better understanding (Emden et al., 2006). Literature in NPD partnerships suggests that if there is shared knowledge than the product development becomes fast and decreases the need for planning and coordination among the two parties. (Rindfleisch and Moorman, 2001). Also an old relationship helps in preserving the proprietary information and increases the ability to resolve any conflicts easier and in a better way. (Gruner and Homburg, 2000; Alam 2006), enabling product development actions to continue more efficiently.

Based on the discussion following hypotheses are inferred:

H1: Lead Userness has a significant effect on new service market performance.

H2: Relational closeness of customers has a significant effect on new service market performance.

H3: Lead userness positively affects the service advantage.

H4: Lead userness positively affects the service innovativeness.

H5: Lead userness positively affects the innovation speed.

H6: Lead userness positively affects the service newness.

H7: Relational closeness of customer positively affects the service advantage.

H8: Relational closeness of customer affects positively the service innovativeness.

H9: Relational closeness of customer positively affects the innovation speed.

H10: Relational closeness of customer positively affects the service newness.

H11: Service advantage effects new service market performance positively.
H12: Service innovativeness effects new service market performance positively.
H13: Innovation speed effects new service market performance positively.
H14: Service newness effects new service market performance positively.
H15: Service advantage mediates the relationship between Lead Userness and New service market performance.
H16: Service innovativeness mediates the relationship between Lead Userness and New service market performance.
H17: Innovation speed mediates the relationship between Lead Userness and New service market performance.
H18: Service newness mediates the relationship between Lead Userness and New service market performance.
H19: Service advantage mediates the relationship between relational closeness and new service market performance.
H20: Service innovativeness mediates the relationship between relational closeness and new service market performance.
H21: Innovation speed mediates the relationship between relational closeness and new service market performance.
H22: Service newness mediates the relationship between relational closeness and new service market performance.
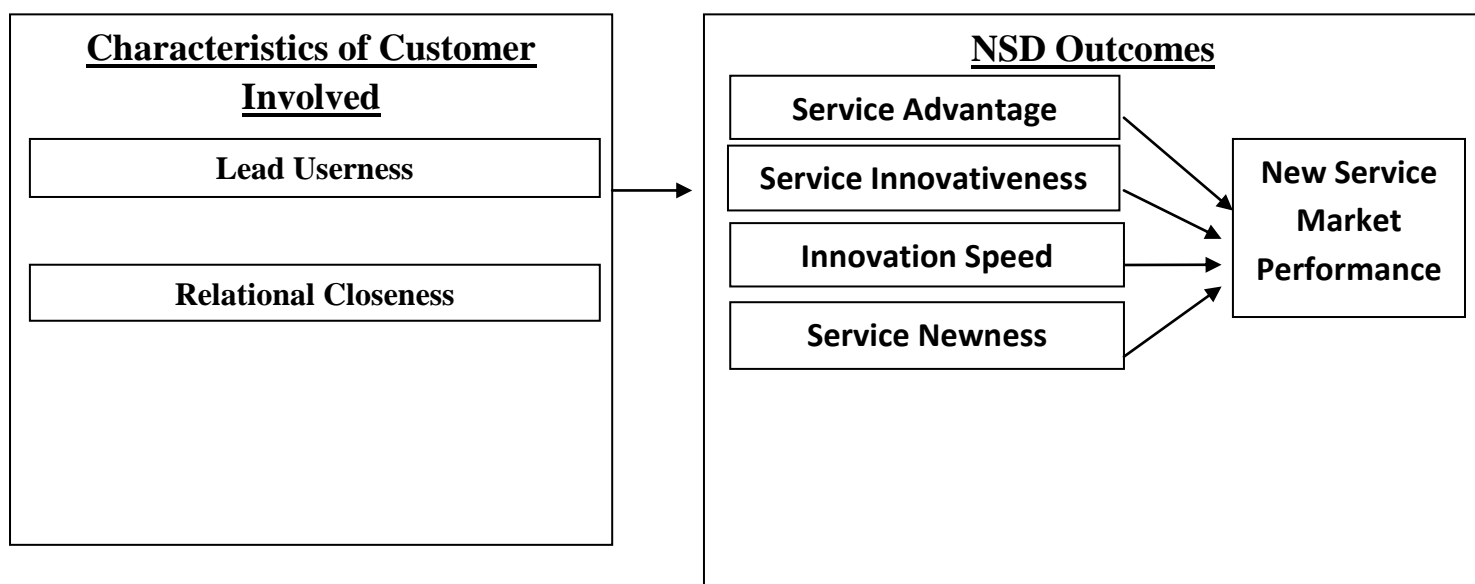

Fig. 1. A schematic diagram of the proposed model

III.   Research Methodology

This was a causal and cross-sectional study which conducted by taking a sample of 200 employees from Muslim Commercial Bank, Allied Bank, Meezan Bank, National Bank of Pakistan, Askari Bank, Standard Chartered Bank andHabib Bank of twin cities of Pakistan i.e. Rawalpindi and Islamabad. The data was collected in the form of questionnaire. Five-point Likert-type scales was used to measure the variables with a range of "strongly disagree" to "strongly agree". Relational closeness and lead users were measured using the scales provided in Carbonell, Escudero and Pujari (2012) and Service newness was measured with four items scale of Avlonitis et al. (2001). Service advantage as well as market performance measuring scales were adopted from de Brentani (1989). Service innovativeness was measured through a scale from Avlonitis et al. (2001) whereas innovative speed was measure the through the scale developed by Bierly (2002).

IV.   Data Analysis and Discussion

Simple Regression, Multiple Regression and Baron and Kenny Test were used for assessing the data.

4.1 Hypothesis Testing
Table 4.1 Multiple Regression Analysis

	Service Advantage			Service Innovativeness			Innovation Speed			Service Newness			New Service Market Performance		
	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p
Lead Userness	.044	.424	.672	.220	2.171	.032	.129	1.364	.176	-.179	-7.762	.081	.281	2.935	0.004
Relational Closeness	.235	2.259	.026	.179	1.764	.081	.420	4.457	.000	.333	3.283	.001	.272	2.834	0.006

Table 4.2 Simple Regression Analysis

	New Service Market Performance		
	Beta	t value	p value
Service Advantage	-.048	-.460	.647
Service Innovativeness	.279	2.656	.009
Innovation Speed	.268	2.339	.021
Service Newness	-.059	-.600	.550

Table 4.3 Baron and Kenny for mediation analysis with Service Innovativeness

	t value	p value
Lead Userness and New Service Market Performance	3.090	.003

Table 4.4 Baron and Kenny for mediation analysis with Innovation Speed

	t value	p value
Relational Closeness and New Service Market Performance	2.465	.015

The first hypothesis of the study was that lead userness has a relationship with new service market performance found true as the regression analysis shows that lead userness has a relationship with new service market performance with 28.1% influence as showed in table 4.1. 2nd hypothesis was that relational closeness has a relationship with new service market performance, was also observed to be true through the regression analysis which shows an influence of relational closeness on new market performance with the strength of 27.2%. The 3rd hypothesis was that lead userness has a positive relationship with service advantage. Hypothesis found true as regression analysis shows lead userness' influence on service advantage with. H4 stated that lead userness has a positive effect with service innovativeness and H5 was that positive effect with innovative speed. The regression analysis showed that both these hypotheses are also true as lead userness was found with a positive influence on service innovativeness showing the strength of 22%. Lead Userness is also has positive effect on innovation speed with the strength of 12.9% as shown in table 4.1. Hypothesis 6 stated that lead userness has a positive effect on service newness. The regression table showed that Hypothesis 6 is partially true as it has an effect on service newness with strength of 17.9% but it effect negatively. Hypothesis 7, 8, 9 and 10 of this study stated that relational closeness has a positive effect on service advantage, service innovativeness, innovation speed and also positive effect on service newness. Three out of four hypotheses of relational closeness are found to be true as the regression analysis showed that relational closeness has positive effect on service advantage, innovation speed, also has a positive effect on service newness with the strength of the effect of relational closeness on service advantage, innovation speed, service newness of 23.5%, 42% and 33.3% respectively (Table 4.1) except service innovativeness. Thus Hypothesis 7, 9 and 10 are accepted. Hypothesis 11, 12, 13 and 14 of study stated that service advantage, service innovativeness, and innovation speed, service newness effect on new service market performance. Hypothesis 11 and 14 have been falsified as simple regression table showed that there is no effect of service advantage and service newness on new service market performance. Hypothesis 12 and 13 are found to be true as the simple regression analysis showed that service

innovativeness and innovation speed has effect on new service market performance. Service innovativeness has effect on new service market performance with the strength of 27.9% and innovation speed has effect on new service market performance with the strength of 26.8% (Table 4.2). Thus it can be inferred that H12 and H13 are accepted. After establishing the conditions of mediation, Baron and Kenny test was applied for testing Hypothesis 16 of the study which stated that service innovativeness mediates the relationship between lead userness and new service market performance. It was found that service innovativeness mediates the above given relationship as $p<0.05$ and $t = 3.090$ (Table 4.3). Therefore H16 is hypothesis is accepted. Baron and Kenny for H21, which was that Innovation speed, mediates the relationship between relational closeness and new service market performance, was found to be 2.465 at the significance level. From this it can be inferred that innovation speed mediates the relationship between relational closeness and new service market performance thus H21 is also true. All remaining hypothesis are found false due to the non fulfillment of necessary condition of test of mediation.

V. Conclusion

In this study the key purpose was to find out the type of customer characteristics that are helpful in developing the new service in Pakistan. The researcher found that:

- Lead userness and relational closeness has a significance relationship with new service market performance.
- Lead userness has a positive effect on service advantage, service innovativeness and innovation speed. It was also found that lead userness has a negative effect on service newness.
- Relational closeness has a positive association with service advantage, innovation speed and service newness.
- Service innovativeness and innovation speed has a relationship with new service market performance. It was also found that service advantage and service newness has no association with new service market performance.
- Service innovativeness and innovation speed mediates the relationship between lead userness and new service market performance. It was also observed that service innovativeness and innovation speed also mediates the relationship of relation closeness and dependent variable new service market performance.

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