

# Towards innovation, co-creation and customers' satisfaction: a banking sector perspective

Banking sector  
perspective

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## Abstract

**Purpose** – Co-creation fosters customer's involvement for innovation in products/services and is used as a tool to develop competitive edge for better entrepreneurship. Based on limited evidence, the study aims to examine the factors contributing to the co-creation and the relationship with customer satisfaction.

**Design/methodology/approach** – A sample of 384 customers from selected banks in Pakistan was selected. The study adopted quantitative, explanatory and cross-sectional research design. Structural equation modeling is used for analysis.

**Findings** – The results revealed a positive and significant relationship between co-creation with customer satisfaction. Further results revealed that access to information, risk assessment and transparency have a positive relationship with co-creation for innovation. The study is significant for customers and management of banks to understand the implications of co-creation to increase customer satisfaction.

**Research limitations/implications** – Few banks with a small number of customers were selected for the study.

**Practical implications** – Managers must consider customer's access to information, risk assessment and transparency of information as necessary factors for co-creation that foster innovation and entrepreneurial opportunities because co-creation strengthens customer satisfaction.

**Social implications** – Adopting the co-creation process brings long-lasting harmony between customers and banks, and customers may consider the banks as being socially responsible by inviting the opinions of their customers.

**Originality/value** – Model is re-tested in the context of Pakistani banks with selected variables affecting co-creation for innovation. Moreover, the relationship of co-creation with customer satisfaction is examined.

**Keywords** Pakistan, Banks, Co-creation (a way to innovation), Customer service, Customer satisfaction, Relationship marketing

**Paper type** Research paper

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## Introduction

A general consensus exists that co-creation with customers is beneficial for introducing innovativeness, but there is a lack of agreement regarding how and why. It is also necessary because a bank working on radical innovations may wish to add or remove customer inputs as per the requirements (Akman *et al.*, 2019). It is noted that the different aspects co-creation like frequency, direction, and content have a positive and equally significant effect on product success while introducing innovations (Gustafsson *et al.*, 2012).

Banks are becoming customers oriented for making innovations and gaining stronger competitive position through customer involvement and satisfaction (Mainardes *et al.*, 2017). Developing an understanding of the co-creation in the banking sector is an emerging area for the banks and customers equally, for bringing in innovations in services. The organizations giving preference to their customers and knowing their requirements have the tendency to develop a bigger pool of loyal customers (Keshavarz and Jamshidi, 2018). By having a bigger pool of customers the banks can gain financial stability (Rashid *et al.*, 2017; Anderson *et al.*, 2004). On the other hand the customer satisfaction demands increased services quality and profitability from the businesses (Keshavarz and Jamshidi, 2018; Horngren, 2004), and demand improved operational performance (Ittner and Larcker, 2003), value creation and bringing higher returns (Chen *et al.*, 2017; Chen *et al.*, 2014). Thus, for any organization, it is important to develop and monitor strategies that enhance customer satisfaction and foster profitability (Chen *et al.*, 2018; Kim *et al.*, 2003). This may be possible through addressing customer preferences (Carù and Cova, 2015), although not an easy task to address. At the same time, the customers are continuously looking for enriched purchase experience through integration (Jaakkola *et al.*, 2015; Prahalad and Ramaswamy, 2004).

Organizations that pay attention to the demands of the customers generally have the capacity to innovate by utilizing their idea bank (Rialti *et al.*, 2017; Payne *et al.*, 2008), commonly called as co-creation. McColl-Kennedy *et al.* (2015) argued that for a company the co-creation is a possibility of interaction and personalization of the product/service. Further, it is noted that co-creation is a concept having a positive impact on the consumers as well (Ranjan and Read, 2016) and vice versa (Ellway and Dean, 2016). Co-creation encourages the customer to participate in the production processes and generally improves the last outcome (Conduit and Chen, 2017). However, it is not yet clear that co-creation always results in positive outcomes, thus the possible gaps exist in the direct relationship of the concept (Keshavarz and Jamshidi, 2018). Therefore, in this context, a study is conducted by examining the relationship of co-creation and customer satisfaction in banking services.

Traditionally, it is observed that the banks create and offer products without seeking the opinion from their customers and market them as per their will. Thus, the products and services remain bank-centric; that may result in being unsuccessful, at times. In this case, the benefits of co-creation cannot be ignored. The customers have diverse knowledge and provide knowledge to the banks and can help banks save their costs of environmental scanning that further help banks to formulate a strategy.

Additionally, it is noted that the co-creation in banking services is studied by Brazilian researchers Mainardes *et al.* (2017) using the DART model. They examined the direct effect of the DART model on customer satisfaction and have ignored co-creation having an impact on customer satisfaction. The DART model explains that Dialogue, Access to information, Risk assessment and Transparency (DART) are necessary to make people involved and satisfied with the products and services being offered.

Mainardes *et al.* (2017) have argued that there can be potential benefits of co-creation to both the parties that are the banks and the customers and have conducted the study in one major bank in Brazil and recommended conducting examinations in other banks. The

current study considered three private and three public sector banks for examining the contributions of co-creation towards customer satisfaction. In this regard, only the perceptions of the customers are recorded for establishing the relationships. The current study is unique in terms considering the service sector, that are banks, rather than considering the manufacturing sector and the co-creation construct is added to the existing framework. This study highlights the importance of co-creation in benefiting the organization and customers for long-lasting relationships.

### Literature review

Customer satisfaction is a necessity to maximize profitability (Keshavarz and Jamshidi, 2018). Organizations focusing on enhancing productivity through relationship building look towards the needs of customers as the first step to innovation (Williams and Naumann, 2011). This generates a feeling of satisfaction by creating a link between individuals and the organization (Szymanski and Henard, 2001). At the same time, the generation of different customer opinions and popping up of insights may provoke innovative products (Mittal and Kamakura, 2001).

Customer satisfaction is the lifeblood for the organizations especially the organizations dealing in services but at the same time, it is considered a challenge (Hofacker and Belanche, 2016; Arvidsson and Caliandro, 2016). Satisfaction leads to creating loyalty and a loyal customer can be a source of continued income. Moreover, loyal customers generally pay less attention to the substitute products available in the market (Jaakkola *et al.*, 2015). It is noted that customer satisfaction increases loyalty and reduces undesired objection to the company and its products/services. Further, the companies should understand the importance of customer satisfaction as it is cheaper to retain the existing customers than acquiring new ones (Chen *et al.*, 2018).

To add to the customer's satisfaction, the co-creation is an emerging term (Zollo *et al.*, 2018) in the banking industry of Pakistan and is considered necessary for planning sustained competitiveness. The awareness among customers has expanded with the availability of internet and other awareness sources and these sources have made customers educated and curious to know and use new products.

For bringing innovations, Verhoef *et al.* (2009) argued that the speed in information sharing and access to various internet options that help in expanding client choices/desires must be considered by banks and if the banks ignore this useful segment possessing multi-dimensional information they may remain disadvantaged (Zhu and Zhang, 2010). The co-creation is a relationship between organizations and consumers that focus on product customization and enable organizations to expedite the process of product creation (Carù and Cova, 2015; Etgar, 2008).

Prahalad and Ramaswamy (2004) argued that consumers have more choices of purchasing goods and services in the present era than ever before but they still seem dissatisfied. The organizations are trying their best to produce a variety of goods and services but still cannot meet the requirements of the customers. This gap can be bridged through sitting together and listen to one another. At the same time, it is becoming more complex to define the meaning of value and the process of value creation that also calls for co-creation.

Payne *et al.* (2008) argued that central to service-dominant logic is the proposition that the customer becomes a co-creator of value. This emphasizes the development of customer–supplier relationships through interaction and dialog. However, research to date suggests relatively little is known about how customers engage in the co-creation of value and they laid emphasis on developing a framework for value creation through co-creation.

Vargo *et al.* (2008) argued that the creation of value is the core purpose and central process of economic exchange. Traditional models of value creation focus on the firm's output and price. The alternate perspective adopted here is, one representing the intersection of two growing streams of thought, service science and service-dominant logic. They viewed that:

- service, the application of competences (such as knowledge and skills) by one party for the benefit of another, is the underlying basis of exchange;
- the proper unit of analysis for service-for-service exchange is the service system, which is a configuration of resources (including people, information, and technology) connected to other systems by value propositions; and
- service science is the study of service systems and of the co-creation of value within complex configurations of resources.

Further, they argued that the service systems interact through mutual service exchange relationships, improve the adaptability and survivability of all service systems engaged in exchange, by allowing integration of resources that are mutually beneficial.

Grönroos (2011) observed that some of the 10 foundational premises of the so-called service-dominant logic do not fully support an understanding of value creation and co-creation in a way that is meaningful for theoretical development and decision-making in business and marketing practice. Without a thorough understanding of the interaction concept, the *locus* as well as nature and content of value co-creation cannot be identified. Value co-creation easily becomes a concept without substance. Based on the analysis in the present article, it is observed that the unique contribution of a service perspective on business (service logic) is not that customers always are co-creators of value, but rather that under certain circumstances the service provider gets opportunities to co-create value together with its customers. So it is to examine that under what conditions co-creation is needed?

Recently, Chen *et al.* (2018) viewed co-creation as a procedure that organizations can use to create products through collaboration with customers. This helps organizations fostering cutting edge innovations, bringing changes in products or structures and to examine the changing inclinations of clients.

Co-creation can also be used as a strategy characterized by transparency in the production of products and a tool to develop trust between producer and customer, thus benefiting both (Arvidsson and Caliendo, 2016; Prahalad and Ramaswamy, 2004). Further, it provides an edge to promote the possibility of having strong control and supervision through the preferences set before offering products or services (Ranjan and Read, 2016).

Errajaa *et al.* (2013) conducted the analysis about co-creation and highlighted that co-creation is the most important for survival of organizations. Moreover, with the collaboration between organizations and individuals the learning is enhanced for both parties (Vargo and Lusch, 2008), keeping this in view the banks can attract and retain customers and the co-creation processes are optimized for better outcomes.

Hung *et al.* (2012) viewed the use of technologies as tools to connect customer and organization having a positive impact on organizational performance in terms of work efficiency and financial outcomes. Bendapudi and Leone (2003) reported the psychological implications of co-creation as satisfaction and having trust in the creator. Furthermore improved quality in the production process, early recovery of product failures and services can be realized (Dong *et al.*, 2008).

In the same run, the Finne and Grönroos (2017) determined another important element for the co-creation that is client access to production process information and relevant

resources as a part of communication, ensuring transparency. It is a structure that allows a partnership with the customer, through facilitating tools like the internet. [Sawhney et al. \(2005\)](#) emphasized the optimization of these tools through investments and new technologies, contributing to a collaborative environment because it enables true interactivity between customers and product/services providers. [Pralhad and Ramaswamy \(2004\)](#) and [Ahsan \(2017\)](#) argued that the banks, through consumer dialogue get access to information that may not be under consideration otherwise.

The consumers having knowledge of opportunities and risks help to reduce uncertainties and make viable decisions in the presence of the available choices. The details of the process add to the confidence of the customers regarding investments in the products offered by the banks. The management of the information becomes valuable for better customer relationships with the company, thus ensuring the satisfaction of those involved ([Garbarino and Strahilevitz, 2004](#)).

Looking at another aspect of DART model, [Pralhad and Ramaswamy \(2004\)](#) viewed transparency as a contributor to the development of cordial organization-customer relationships. Ambiguities can be removed and error-free work can be ensured at the organizational level. [Vargo and Lusch \(2008\)](#) defend the basic premise of co-creation as equal access to information can boost positivity in the production of goods and services. [Ballantyne and Varey \(2006\)](#) argued that customer's dialogue with the company is a reciprocal need of the day for innovation.

In addition, [Garbarino and Strahilevitz \(2004\)](#) pointed out that the transparency of information, when facilitated by access, becomes advantageous for the company by mitigating the risks involved. This provides an interactive environment and the production of goods and services becomes a responsibility for both.

[Pralhad and Ramaswamy \(2004\)](#) revealed that the traditional system of company-centric value creation (that has served us so well over the past 100 years) is becoming obsolete. Leaders now need a new frame of reference for value creation. In the emergent economy, competition will center on personalized co-creation experiences, resulting in value that is truly unique to each individual.

They examined a new frontier in value creation emerging, replete with fresh opportunities. In this new frontier, the role of the consumer has changed from isolated to connected, from unaware to informed, from passive to active. As a result, companies can no longer act autonomously, designing products, developing production processes, crafting marketing messages, and controlling sales channels with little or no interference from consumers. Armed with new tools and dissatisfied with available choices, consumers want to interact with firms and thereby co-create value. The use of interaction as a basis for co-creation is at the crux of our emerging reality. The co-creation experience of the consumer becomes the very basis of value.

It is assumed that all the components of the DART model are important. [Pralhad and Ramaswamy \(2004\)](#) argued that the dialogue is a real interaction amongst clients and organizations. According to [Ballantyne and Varey \(2006\)](#), communication generates trust and the wishes and needs of customers are well communicated for new productions. The quality of this relationship is achieved over time, from mutual learning. Dialogue brings several benefits together such as bringing customer knowledge onboard, improving structures, making work error free, enhancing creativity and solving problems ([Hoyer et al., 2010](#)) and so forth.

#### *The framework*

The hypotheses were developed on the basis of dimensions, dialogue, access, risk assessment and transparency having the relationship with co-creation and further

co-creation affecting satisfaction, keeping in view the recommendation made by [Mainardes et al. \(2017\)](#) (Figure 1).

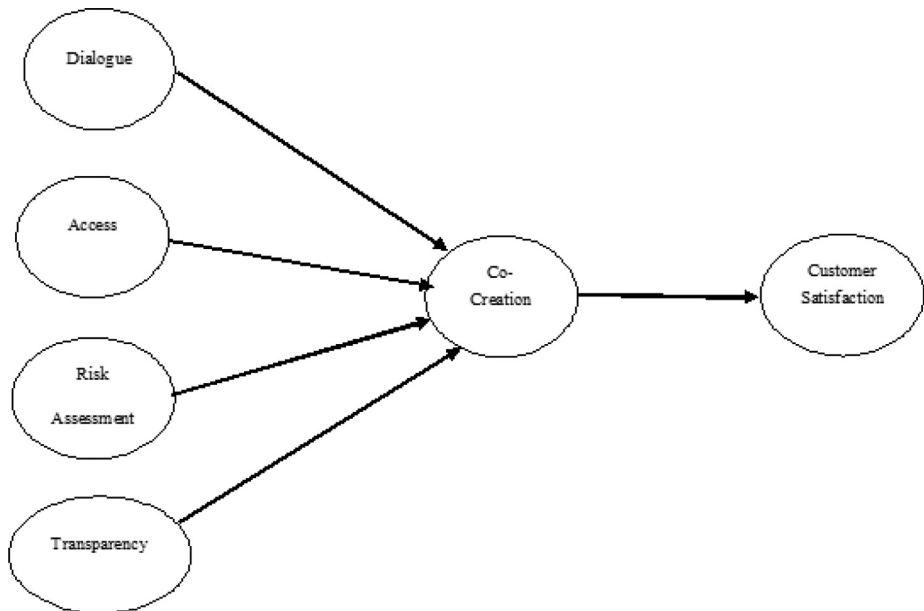
*Hypotheses developed*

- H1. There is a positive relationship between “dialogue” with “co-creation” in banks.
- H2. There is a positive relationship between “customer’s access to information” and “co-creation” in banks.
- H3. There is a positive relationship between “risk assessment” and “co-creation” in banks.
- H4. There is a positive relationship between “transparency” and “co-creation” in banks.
- H5. There is a positive relationship between “co-creation” with “customer satisfaction” in banks.

**Methodology**

The research design used for the study was quantitative, cross-sectional, and deductive and based on primary responses. The population of the study is based on the customers of the selected banks. A sample of 384 customers is used for this study including the customers from three private banks ( $n = 207$ ) and three public banks ( $n = 177$ ). The convenience sampling technique was used. The convenience sample was used keeping in view the availability and willingness of the customer to fill in the questionnaire. The customers were told about the reason for data collection, that is, purely the research.

The co-creation scale is adopted from [Albinsson et al. \(2016\)](#) having 23 items including dimensions such as Dialogue, Access, Risk Assessment, and Transparency, whereas



**Figure 1.**  
Research framework

**Source:** Adopted from Ahsan (2017)

customer satisfaction questionnaire is adapted from [Mainardes et al. \(2017\)](#). All the items were gauged on five-point Likert scale. The respondents, that were the customers, were contacted by visiting the branches of the banks. The customers were found cooperative enough to fill in the responses regarding co-creation and reporting their satisfaction levels from the services they availed at banks.

Moreover, it is to mention that the perceptions of customers were recorded for examination and it is not merely confirmed that whether the banks are using the co-creation processes in actual or otherwise. Therefore, this still remains an unanswered question.

## Results

[Table I](#) shows that the total number of responses recorded were 384 out of which there were 207 respondents from the private sector banks as compared to the 177 from the public sector. It was ensured that all the respondents must have at-least Bachelor's degree or above. This was considered necessary because the readers must be able to understand the statements asked and respond to the statements written in the questionnaire. Majority of the bank customers belonged to the age group 36 to 45 ( $n = 158$ ) followed by the age group 26 to 35 years ( $n = 144$ ). Male ( $n = 292$ ) actively participated in the survey as compared to the females ( $n = 92$ ). When asked about the years of availing bank services it was revealed that majority of the customers were using the services of bank from three to seven years ( $n = 98$ ).

### *Internal consistency reliability*

Internal consistency reliability (construct reliability) was assessed using the composite reliability (CR) and Cronbach's alpha that must be  $> 0.7$ . The results revealed that the CR values are ranging from 0.798 to 0.948. Cronbach's alpha value ranged from 0.721 to 0.909. Convergent validity of the model is assessed through Average Variance Extracted (AVE), the results of which must be greater than or equal to 0.5, thus the results of this study fulfilling the criterion see [Table I](#). Further, the factor loadings, to present confirmatory factor analysis were also presented in [Table I](#). The Confirmatory factor analysis is conducted to examine the validity of the instruments used for the study.

### *Partial least square as an estimation tool*

[Hair et al. \(2014\)](#) argued that PLS (SEM) is one of the best techniques for path-modeling having the ability to run compound analyses simultaneously.

### *The coefficient of determination and inner model path coefficient*

[Wong \(2013\)](#) suggested an examination of the reflective model, the coefficient of determination and inner model path coefficients for analysis. Further analysis is provided below: ([Figure 2](#))

Circles in the above figure show that how much the variance independent (exogenous) variable is explained by independent (endogenous) variables and value on arrows represents how strong one variable have the effect on other ([Wong, 2013](#)). The coefficient of determination ( $R^2$ ) is examined to assess the strength of the structural model. It is noted that all constructs show moderate values of  $R^2$ .

### *Hypothesis testing*

Bootstrapping was applied to obtain the path-coefficients and their corresponding  $t$ -values. This helps to determine the significance of the path-coefficient. [Table I](#) shows the value of path-coefficients and  $t$ -values, see [Table II](#).

Variables	Category	Frequency	Loadings	AVE	CR
Banks	Public	177			
	Private	207			
	Total	384			
Education	>Bachelors	384			
	Total	384			
Age (years)	18 – 26	26			
	26 – 35	144			
	36 – 45	158			
	<46	56			
	Total	384			
	Total	384			
Gender	Male	292			
	Female	92			
	Total	384			
Using Bank	>1 year	41			
	1-3 years	89			
	3-5 years	73			
	3-7 years	98			
	<7 years	83			
	Total	384			
<i>Dialogue</i>				0.5139	0.7010
DL1			0.7908		
DL2			0.7123		
DL3			0.8912		
DL4			0.8561		
DL5			0.7332		
DL6			0.7341		
DL7			0.9134		
DL8			0.7111		
<i>Access to information</i>				0.5049	0.8091
AI1			0.7708		
AI2			0.7222		
AI3			0.7342		
AI4			0.7652		
AI5			0.7658		
AI6			0.9721		
<i>Risk assessment</i>				0.6071	0.7631
RA1			0.7721		
RA2			0.7653		
RA3			0.7342		
RA4			0.9542		
RA5			0.8210		
<i>Transparency</i>				0.6071	0.7631
TR1			0.8755		
TR2			0.9112		
TR3			0.7334		
TR4			0.7121		
<i>Customer satisfaction</i>				0.6641	0.8229
CS1			0.9001		
CS2			0.7331		
CS3			0.7865		
CS4			0.9876		
CS5			0.8711		
CS6			0.7121		
CS7			0.7555		
CS8			0.7321		

**Table I.**  
Demographics, factor loadings, AVE, CR

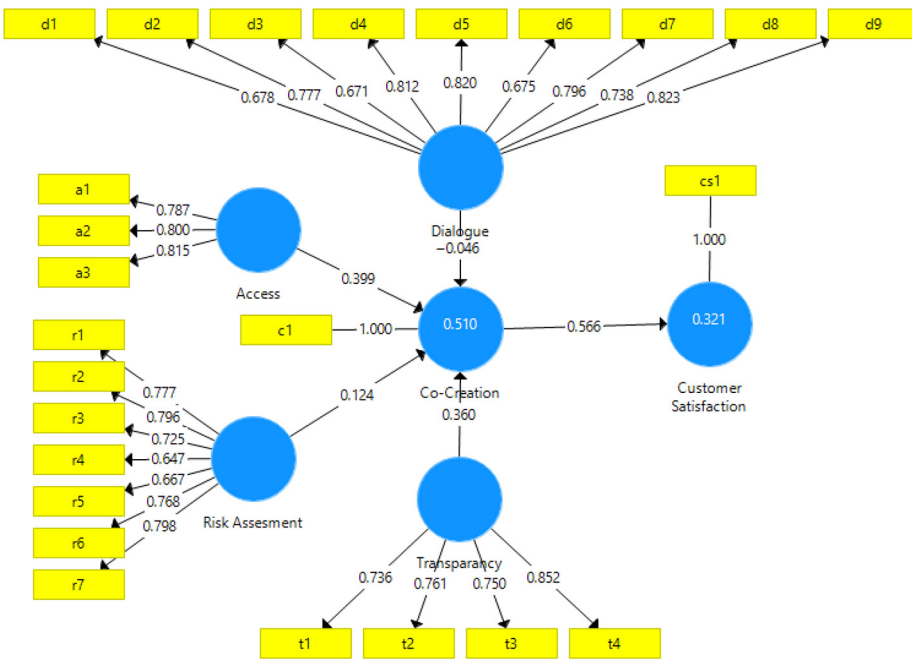


Figure 2. Measurement model path diagram

Relationships	Original sample (O)	SD	T statistics ( O/STDEV )	p values
Access → Co-Creation	0.40	0.046	8.616	0.000
Co-Creation → Customer Satisfaction	0.566	0.034	16.483	0.000
Dialogue → Co-Creation	-0.046	0.044	1.045	0.296
Risk Assessment → Co-Creation	0.12	0.038	3.235	0.001
Transparency → Co-Creation	0.36	0.037	9.607	0.000

Table II. Bootstrapping results

The hypotheses testing results show that the path-coefficients and *t*-values (significant at  $p < 0.05$  with *t*-values  $> 1.96$ ), except for one relationship.

Additionally, for ensuring the model fitness the SRMR and NFI were examined, that met the required criteria of being less than 0.08 and greater than 0.9 respectively, as per recommendations of the experts (Hair et al., 2017).

Summary of results

The relationship between dialogue and co-creation is not significant as  $\beta = 0.296$  and the *t*-values of outer loading is less than 1.96. Results indicate that dialogue has a non-significant impact on co-creation. Further, the beta shows just 29.6 per cent changes in co-creation by 100 per cent change in dialogue.

Relationship between Access and co-creation is significant with the positive influence as the *p*-value = 0.000 with *t*-values was 8.616 of outer loading greater than 1.96. Therefore,  $H_2$  is accepted.

Risk Assessment shows a direct significant relationship with the dependent variable.  $P$  value = 0.000 value of co-creation and  $t$ -values is 3.235 which is above 1.96. Consequently,  $H3$  also accepted.

Transparency also has a direct positive influence on co-creation.  $P$  value = 0.000 and  $t$ -values is 9.607 which is above than 1.96 it noticeably signify. Thus,  $H4$  is accepted.

Co-creation for innovation has positive significant relation with customer satisfaction  $p$ -value = 0.000,  $t$ -values is 16.483 which is above from 1.96. Accordingly,  $H5$  is accepted for the study.

### Discussion

The bank customers reported that the “dialogue” was not statistically significant and not counting towards co-creation. It shows that customers/clients are not actively invited to express their ideas and suggestions for bringing improvements in the upcoming products/services and are not made part of the co-creation process. So  $H1$  is rejected. The constructs including access, risk assessment, and transparency were positively significant (Malhotra *et al.*, 2006). Therefore,  $H2$ ,  $H3$  and  $H4$  are accepted and  $H1$  is rejected. Keeping in view the results the dialogue, although having importance is not given much importance in designing the innovative products by the banks that may restrict the entrepreneurial opportunities for banks where as other constructs have been given more importance by the banks.

Earlier, Prahalad and Ramaswamy (2004) reported four variables of the DART model to enable customers to co-create. This study revealed that “Access”, “Risk Assessment” and “Transparency” are positively related with co-creation for innovation and co-creation has a positive link with customer satisfaction.

The development of strong and fair communication channels can guarantee creating positive word of mouth and thus better satisfaction can be ensured (Chen *et al.*, 2017). The organizations providing access to information and receiving suggestions from the customers can introduce innovative products and can expand their entrepreneurial scope by offering better quality of products and services (Keshavarz and Jamshidi, 2018).

Banks focusing one-sided communication may consider the supply side as important one only and ignore the demand side that may cause disadvantaged entrepreneurial and competitive position (Conduit and Chen, 2017). Developing fair and clear channels of communication reduce conflicts and ambiguities and develop bank – customer trust. Customers play the role of ambassador and spread positive word of mouth if they feel satisfied and vice versa (Finne and Grönroos, 2017). Further, the benefits of having a dialogue with customers may include valuing customers is a key to success for any selling organization. Asking customers about their ideas about bringing in the new products gets their self-esteem higher and their start getting involved in the organizational matters and thus feel respected and develop a sense of trust on the product offering organization. The dialogue is becoming a cry for organizational development and market expansion. Through dialogue the changing market demands can be well addressed, the perceptions and expectations can be well matched, thus changing their word of mouth regarding the organization. This customer-bank collaboration can open innovative entrepreneurial opportunities for the banks. Moreover, the client’s complaints may also be catered for. At the same time, by removing their ambiguities and complaints, the organizations may also retain them for longer and thus boost their profits. Through two-way communication, the dis-satisfied customers can also be contacted and the barriers can be removed. However, at the same time, it is to consider that sensitive information may also go out of the bank while having discussions with the customers and the banks may experience competitive

disadvantage, if that information is leaked to other banks in competition. This may be a reason that banks may opt to avoid dialogue with outside stakeholders.

Another element, the transparency, creates trust between customer and organization (Medina and Rufin, 2015) and access to the information makes people aware of their value to the organization and supports risk assessment. These enhance entrepreneurial opportunities for banks by building trust and helps banks develop infrastructure free of ambiguities (Akotey and Abor, 2013).

The DART model is re-examined in the context of Pakistan that revealed almost the same results as of earlier studies, except for the dialogue component. It means that this model has the potential for testing in different contexts and the researchers may consider it testing in various products and services organizations. The weaker results of dialogue may predict that banks want to maintain their financial secrecy this they do not prefer to indulge more in dialogue process but at the same time it cannot be ignored that by doing so they may lose the innovation and entrepreneurial opportunities.

## Conclusion

Co-creation for innovation and expanding entrepreneurial avenues is necessary that brings customer satisfaction. The factors contributing towards co-creation include access to information, risk assessment, and transparency. The dialogue was found to be a weaker factor in co-creation keeping in view the current ample. In the Pakistani context, all the factors of the DART model are not effective in offering new bank products/services that introduces contradiction to the existing evidences. The customers felt that dialogue between customers and policymakers is a missing link in co-creating value and it should be focused upon. Access to information is there but after the product/service is finalized by the bank and is offered to the customers without their consent.

## Implications/suggestions

Co-creation for innovation and entrepreneurial openings must be considered by the bank managers and policy makers to enhance customer services and satisfaction in the banking industry. The dialogue must be given preference for developing better communication and interpersonal relations with the customers for inviting better input and choices from the customer side for better co-creation. Further, the banks that want to expand their operations and products have to consider the opinions given by the customers because customers are kings and they want to purchase such products that they like to form the core of their hearts. Co-creation reduces risks of failure, builds long-lasting relationships and becomes a source of sharing positive word of mouth and so forth that is why the managers must consider it to be the foremost.

Considering the selected/examined factors will add to the banks entrepreneurial orientation and will add to the competency of banks as a whole (Al-Mamun and Fazal, 2018). It is to note here that the customers should be used as a resource by the banks. When these are used as a resource, the betterment in the competitive position can be ensured. This resembles with the resource-based view adopted by the banks. This is how the banks can pay attention to the creativity and innovation and can enhance their performance. Moreover, this can be used as a tool to develop trust among customers and bank (Chiu *et al.*, 2017).

For the purpose of co-creation, there is need to develop a mechanism through selecting and training employees to be helpful, polite, responsive and empathetic towards bank customers can trigger co-creation. Communication between banks and customers should boost customer approval and delight and customers will feel comfortable in sharing their views openly. The banks can offer incentives, reliable service delivery and a recovery design

to stimulate customer participation in bank co-creation. Soliciting feedback requires sound technological support and direct communication links with bank customers. Keeping in view the results of the study; from a practical perspective, the research impacts on theory building, management decision making, and teaching.

Further, despite a general consensus that co-creation with customers is beneficial, there is a lack of agreement regarding how and why. The present study addresses this shortcoming and shows that co-creation is largely about access to information, risk assessment, transparency to understand their future needs. The bans can grow by using the components of the DART model and the customer's satisfaction can be enhanced through adequate policy-making.

#### *Limitations and future directions*

The study considered four factors of co-creation that limit the results to four factors. The coefficient of the determination indicates that other dimensions of co-creation could be identified and related to the concept. At the same time, the use of probability sampling technique will add to the value of the research by making it plausible for generalizing the results. Moreover, the direct effects were examined limited to customer satisfaction. The addition of other constructs having indirect effects such as trust in the offering company may also add value to the research. The inclusion of other customer-oriented businesses for testing the same model will be a good contribution to the literature.

In the current study, the linkages are examined based on the perceptions of the customers that predicted their opinions regarding using the selected factors for co-creation thus still leaving space for the other factors to be considered. It is still not clear whether actually these factors (DART) model really contribute towards co-creation and customer satisfaction or not? Further a single sector and selected banks were included for in this study for analysis a broader range of organizations representing different sectors, manufacturing and non-manufacturing, may add value to the existing framework. Additionally the adoption of longitudinal design will bring brighter insights to the study. Further in this study, the direct relationships are examined and the need is still remaining to examine the indirect relationships by including the mediators and moderators especially by considering different cultural dimensions.

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