Impact of CRM adoption on organizational performance: Moderating role of technological turbulence

Abstract

Purpose/aim

Customer relationship management (CRM) is instrumental to attain and sustain organizational competitive advantage. Innovation in terms of CRM adoption is the key to gain competitive advantage, and being innovative is dependent on how well organizations know about changing demands of customers and their changing ways to gain access to the market. There is hence a need to develop ongoing empirical insights from diverse management perspectives on the effect of CRM adoption on organizational performance. In this context, this study aims to develop empirical insights, in relation to the moderation of technological turbulence in the banking sector.

Design/methodology/approach

Primary data is collected and analyzed from 277 CRM staff-members of the banking sector in Pakistan, in order to test a conceptual model. Frequencies of demographics are calculated with correlation and regression analysis using SPSS. The correlation was performed to identify the direction that exists between the dependent and independent variables and the regression analysis was performed to study the strength/intensity of the independent variable over the dependent variable. Moderating regression analysis was performed in order to find the moderation effect of technological turbulence on CRM adoption and organizational performance.

Findings

The CRM adoption has a critical positive impact on organizational performance in the settings of business-to-customer (B2C) perspective in the banking sector. Moreover, the results uncover that improved client satisfaction through CRM adoption prompts better organizational performance in the B2C organization. We also have found that technological turbulence has a negative guiding impact on the association linking with CRM adoption, as well as organizational performance.

Research implications

The conceptual model that is proposed in this study and supported by empirical insights offers researchers to develop future research studies on the moderating role of technological turbulence, in order to analyze the influence of CRM adoption on organizational performance.

Practical implications

The empirical insights of this study are valuable for the professionals in the banking sector and other B2C organizations, in order to enrich their organizational performance through CRM adoption, while considering the moderating role of technological turbulence.

Originality/value

Based on an empirical study, in support of an original conceptual model, the insights of this paper contribute to the extant literature in the CRM, bank marketing and management, service management, B2C marketing, and the emerging economy knowledge streams.

Keywords: CRM, organizational performance, bank marketing, B2C, technological turbulence, service management.

Article type: research paper.

Introduction

The base of customer relationship management (CRM) is focused on the relationship marketing principles (Rahimi & Kozak, 2017). From the scholarly reviews, there is very much evident attention, which has stimulated the research community and also obtained interest from practitioners (Galbreath & Rogers, 1999; Soltani & Navimipour, 2016). The contemporary business management practices which are now undertaken in the market are market driven and to be specific, it is customer driven. The reason for such customer driven management practice is that organizations are now focusing on market orientation (Narver & Slater, 1990), in order to cope up with the changing market/customer needs.

A lot of research studies have been undertaken in the CRM area; however, the CRM knowledge-stream is still attractive, in terms of its novelty and tremendous diversification scope in operations of CRM adoption inside the organizations (Ngai 2005). Additionally, we have also seen CRM as a strategic macro process (Campanella et al., 2016), as a purpose of profit maximization from favorable customer relationships. The extant literature offers trivial focus on CRM adoption for enriched firm performance, specifically from the perspective of business to consumer context (B2C), where technology adoption plays a key role in CRM operation. In this context, the motivation of this current study is to explain the impacts of CRM adoption in Business to Consumer (B2C) organizations. The study presents an original conceptual model that is supported by empirical analysis.

This study is based on relationship marketing theory, which has comprised with a most important change from the perspective of business (Morgan and Hunt, 1994), which is measured as the rational antecedent of CRM (Zablah et al., 2004). Value is one of the central ingredients of relationship marketing (Shams, 2016a; 2016b; 2016c). The value of products or services is a resource of growing customer satisfaction (Shams & Kaufmann, 2016; Thrassou et al., 2012; Thrassou et al., 2018a), which in turn ensures enhanced relations with the customer (Ravald and Gro¨nross, 1996; Gro¨nross, 1997). Relationship marketing emphasizes to preserve and improve continuing relations with present customer as well as recognizing and acquiring fresh ones (Gro¨nross, 1999; Hunt et al., 2006; Das, 2009; Shams, 2017). Hunt et al. (2006) recommend that the relationship marketing theory has the prospect to underpin many dimensions of business approach. The authors recognize CRM as one of the aspects of relationship marketing, and technologies such as CRM system/software can be used to support relationship building process, which allows an organization to develop insights on individual customers' diversified behavior.

Following the discussion thus far on the theoretical aspects in this introductory section and the subsequent discussion in the literature review section, this study attempts to develop insights from an emerging market perspective of Pakistan. Service sector is a major contributor in the economy of Pakistan, which has a contributory share of 53% in economic growth (Hassan, 2011). The growth of this sector indicates the ongoing need for research in this area in emerging markets like Pakistan. This study will add on to the services sector and especially service research in Pakistan, in terms of CRM adoption in the service industry, such as the banking sector. In this context, considering Pakistan for this study will offer new insights in the service sector research and practice in an emerging economy perspective. CRM is a buzzword in business and is perceived as one of the most effective tools in the banking sector (Gupta and Mittal, 2013). Many firms (including banks) are adopting CRM concepts in their practice to better serve their customers (Alhawari, 2014; Abu-Shanab and Shihadeh, 2014). As result, CRM systems have appeared as one of the contemporary banking applications (Singh and Sirohi, 2014).

The service sector has been selected due to the lack of literature focused on services sector in CRM innovation studies, in particular in the emerging markets (Vrontis et al., 2012; Yahiaoui et al., 2013; Santoro et al., 2017), and also, service industries are different from manufacturing organizations in some aspects, which can become catalyst for competitive advantage (Prajogo, 2006). In last few years, service industry has gained importance and this area needs to be further explored (Hsueh, Lin, & Li, 2010; Shams & Thrassou, 2018). All businesses in manufacturing also require services in their operations (Antioco, Moenaert, Lindgreen, & Wetzels, 2008; Thrassou et al., 2018b; Thrassou et al., 2018c). For example, areas like computer software, telecom, entertainment, must adhere the environmental turbulence, as these are the most turbulent markets identified in terms of technology adoption. In this market environment, turbulence especially, the diverse technological turbulence dimensions is the most critical problem faced by the managers (Mullins & Sutherland, 1998; Trequattrini et al., 2016). In this context, and following the discussion thus far, this study aims to develop empirical insights, in relation to the moderation of technological turbulence in the banking sector in an emerging market context of Pakistan.

Literature review

Organizational performance

Ahani et al. (2017) argue that CRM adoption has effect on organizational performance from the perspective of small and medium enterprises (SMEs). According to Li et al. (2006) organizational performance is how well an organization attains financial, as well as marketing goals. Boulding et al. (2005) points out by means of the purpose that an organization's additional activities, apparently CRM should increase performance of the firm. Therefore, several researches have been investigated the impact of CRM operations on organizational performance (e.g. Reinartz et al., 2004; Ryals, 2005; Sin et al., 2005; Yahiaoui et al., 2017). From the same researches greater insights have been explored in the context of B2C setting. In these articles quantification of organizational performance is different from the revenues, as well as direct cost related with activities of CRM (e.g. Ryals, 2005) to amendments in information of consumer, customer as well as gratification of customer (e.g. Mithass et al., 2005). Other researches (e.g.

Sin et al., 2005) intend toward confine organizational performance from its multifarious perspectives by quantifying both marketing as well as financial performance all the way through several designators. The performance measures from objective as well as subjective perspectives have been engaged relying on information accessibility as well as the respondent's disposition to make available secret data of the company.

Previous researches have been attempted to measure organizational performance from its both financial as well marketing perspective, which includes return on investment/asset, sales profit margin, share of market, growth of market share, as well as profitability on the whole (Li et al., 2006, Sin et al., 2005). Nonetheless, keeping above all in view performance of the organization in our study has been measured through primary data collected from industry service sector. All organizational performance is subjectively measure that how good the organization is in terms of operating with reverence to its main competitors.

CRM adoption

CRM is explained by some researchers, as a technology but in sense of other authors, it is a data mining procedure (Firth and Cameron, 2006; Lager, 2008; (Triznova et al.2015). There are varying approaches, viewpoints when scholars have described CRM. According to (Ryals and Payne, 2001) CRM is information-enabled relationship marketing, as well as those strategies of relationship marketing, which have specific importance on the relations of customer that also turned into practical functions (Gummesson, 2004). CRM adoption tactical approach for the present study is defined by Payne and Frow (2005), which defines CRM as a cross-functional incorporation of processes, people, operations, and marketing capabilities that is qualified through information, technology, and applications.

In recent times, marketers have been seen attempts on the way to slot in present demanding environment. In short, we have optically discerned how the acceptance of incipient technology as well as the cyber world has facilitated CRM practices to prosper. The communication intended for prospective purchasers can now be tailored on individual level all the way through e-mails, expressive media, e.g. YouTube, Facebook pages, blogs as well as Twitter (Greenberg, 2009; Quinton and Harridge-March, 2010). Simultaneously, for the help of marketers, the relations

involving purchaser as well as seller can now be accumulated in a CRM database system. This collective point in time has not merely greater than before teamwork linking the firm as well as consumer apart from joined through ongoing hi-tech advances; now the marketers has capability to record information of customer pathway optimally, in order to modify contributions for the suitability in terms of individual customer needs as well as requirements. This hi-tech impact for the firm to deal one customer in one time independently through CRM activities can be used. Eventually, these cognations may well give them an advantage more than their opposition.

The previous studies (e.g. Sin et al., 2005; Croteau and Li, 2003; Jayachandran et al., 2005) suggest numerous elements of an organization that enable the organization to effectively adopt CRM. The core constructs include customer-centric management, CRM organization as well as operational CRM. In this context, we suggest our primary hypothesis:

H1: CRM adoption is positively related to organizational performance.

Customer-centric management

The purpose of CRM adoption is to have better customer satisfaction, which indisputably demands execution of strategies from the perspective of customer-centric business. Zablah et al. (2004) hypothesize that centricity of customer as an important organizational input that firms need to form a profit-maximizing portfolio of customer relations. Even though customer-centric management ideas are theorized in different scholastic works after having significant differences in the approach, they have been part of CRM adoption models all the time (Croteau and Li, 2003; Reinartz et al. 2004; Jayachandran et al., 2005; Sin et al., 2005). The real meaning of Customer-centric management is it involves practices with the purpose of ascertaining all organizational actions as well as decisions are tenacious by the aspiration to make happy customers feel more preponderant, which revolve calls in support of a set of practices staged more or less for the purpose of improved appreciative as well as more preponderant accommodating customers. In this regard, we incorporated the sub variables of the same customer knowledge management as well as customer valuation to represent the “understanding of customer” aspect, while other sub variables like segmentation, customization, as well as differentiation explicating the “serving customer” feature of customer-centricity. In the same

way, we developed hypothesis to check the connectivity of customer-centric management and organizational performance:

H1a. Customer-centric management is positively related to organizational performance.

CRM organization

CRM goes further than an orientation of customers. CRM prosperity depends at the core on primary transmutation within the organizational commitment, organizational culture for developing more preponderant cognations among change management practices, customer concretely within the organization, with the purpose of worker adoption, as well as conversation in the organization. Boulding et al. (2005) in the CRM literature emphasize that insufficient concentration is given to the matters of people and stakeholders, and argue that the purpose of those organizational issues which are important in CRM execution for the reason that employees are a consequential element in terms of the deliverance of CRM actions.

Subsequently Payne and Frow's (2005) intention with the role of CRM entails a cross-functional combination of cognition operations with people and abilities of marketing, centered on a line of investigation. Additionally for studying the relationship of organizational performance and CRM, we integrated organizational commitment (Croteau and Li, 2003; Jayachandran et al., 2005), organizational structure (Sin et al., 2005; Jayachandran et al., 2005), as well as employee performance (Sin et al., 2005; Jayachandran et al., 2005) as CRM organization constructs to test the following hypothesis:

H1b. CRM organization is positively related to organizational performance.

Operational CRM

Peppers and Rogers (2004) conceptualize that operational CRM with the purpose of focuses on the IT-related process, which affects the day to day processes. Since long, information technology has been acknowledged as a facilitator in practices of CRM (e.g. Chen and Popowich, 2003; Croteau and Li, 2003; Sin et al., 2005). Sin et al. (2005), in their effort for

CRM conception as well as development of scale, recognize that CRM technology is customer focused, in order to be a CRM organization by means of effective organizational knowledge management as a CRM adoption element. CRM is also one of the supply chain macro processes to increase the firm performance (Chopra and Meindl, 2007). According to Chopra's and Meindl's (2007) arguments CRM macro process gives emphasize on the crossing point among its customer and firm. In our current study, we broaden operational CRM to incorporate processes which is customer focused, with a purpose of positive effects of CRM action are improved when firm begins its relationship, as well as continuation of processes, to be at exact point of stakeholder relationships for the CRM processes. In this context, our research integrates customer's solid interface as operations of handling customer order, pre/post sales, complain handing, process of marketing and usage of CRM technology from the operational CRM point of view. Operational CRM conveys new theoretical explanation in terms of process focus as a result of adoption of CRM. Thus, we hypothesize that:

H1c. Operational CRM is positively related to organizational performance.

Technological turbulence

The concept of technological turbulence mainly studied at the macro level and also reviewed as priori or a given environmental feature that organizations face (e.g., Danneels & Sethi, 2011; Hanvanich et al., 2006; Li & Atuahene-Gima, 2001). The external environment, which entails market turbulence and its intensity that increase market competition and technological turbulence as an uncontainable force on which organizations have no control and which also impact performance of the organizations (Navarro-García, Arenas-Gaitán, & Rondán-Cataluña, 2014; Wang, Chen, & Chen, 2012). The intensity in the competition discusses how competitive a market is, whereas market turbulence discusses the change in customers' needs and technological turbulence also discuss as new technology introduction within short frame of time (Chavez et al., 2015). In such competitive and innovative environments, where new services and products are being developed and, where a lot of technological advancement involved in it,

which refers to a situation where technological turbulence exists with all of its practical implications (Prajogo, 2006).

Technology is of two types: first one is sustaining technology and second one is disruptive technology. The second technology is the major cause that can lead to negative performance and the first one can lead to better performing new products and services (Iamratanakul, Patanakul, & Milosevic, 2008). The timely decisions to adopt the changes and inculcate them, while keeping in mind the customers and competitors (Iamratanakul, Patanakul, & Milosevic, 2008) are crucial here to positively incorporate new technology in a competitive business environment. In industries where technological turbulence is on higher side, the performance has variance on the progressive side, in comparison to technologically stable environments (Hortelano & Moreno, 2010). Changing technologies and market conditions create uncertainty regarding performance of new product or service (Utterback & Afuah, 1998). Keeping above all discussion in view, technological turbulence has been taken as a moderator in our study and it has moderating effects on CRM adoption and organizational performance, and consequently, the following hypothesis are developed to detect the impact of technological turbulence on organizational performance:

H2. Technological turbulence moderates the relationship between CRM adoption and organizational performance.

H2a. Technological turbulence moderates the relationship between customer-centric management and organizational performance.

H2b. Technological turbulence moderates the relationship between CRM organization and organizational performance.

H2c. Technological turbulence moderates the relationship between operational CRM and organizational performance.

H3. Technological turbulence has an impact on organizational performance.

Figure 1 presents the conceptual model of this study.

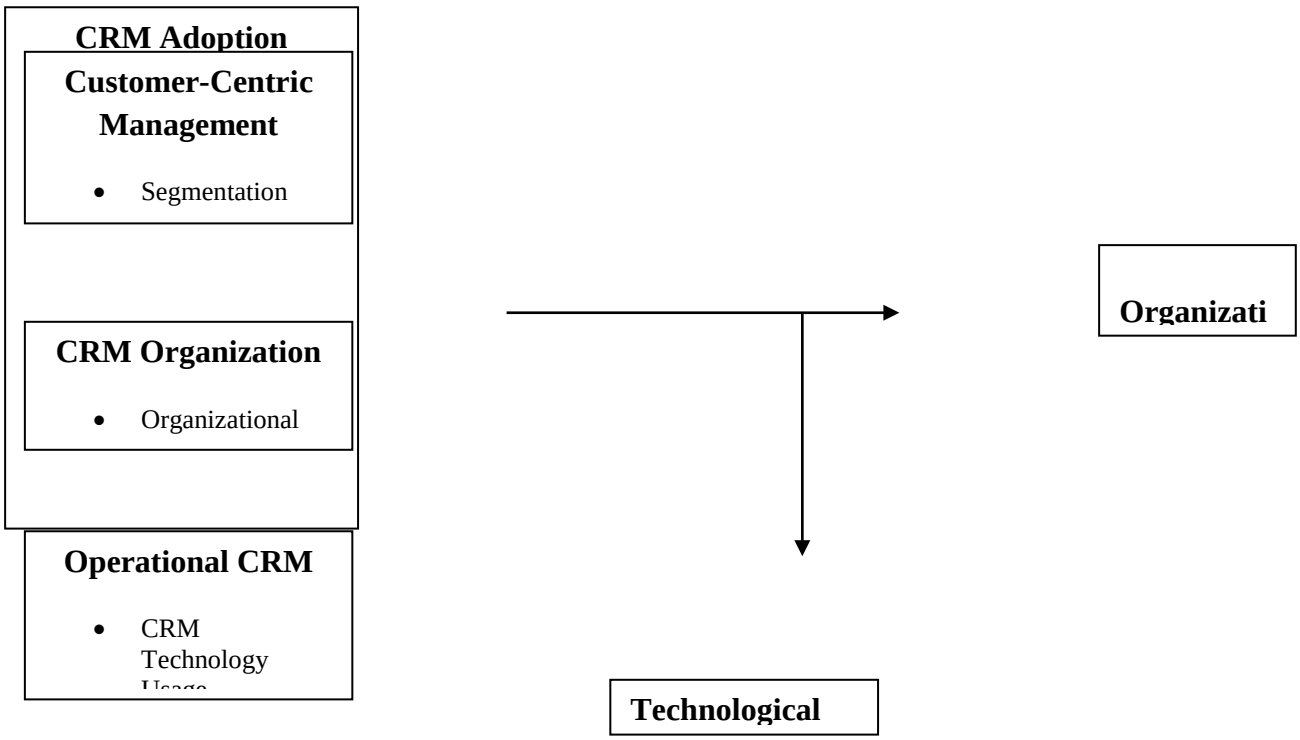

Figure 1: Moderating effect of technological turbulence on CRM adoption and organizational performance.

Data and Methodology

Data Collection

In this research, the primary data has been collected to analyze the impact of CRM adoption on organizational performance. The five scale Likert questionnaire is used for collecting data from the respondent. The non-probability purposive (judgmental) sampling technique is followed to collect data from the Pakistani Banking Industry. Our target populations are individuals and the managers who are working in the banking industry. The data is gathered in between April 16th, 2014 to July 30th, 2014. For this research 300 questionnaires were distributed from which 277 responses have been found correct. Appendix 1 presents the questionnaire. Finally the following scale has been used to analysis the CRM adoption on employees' performance.

Table 1: Research Instrument

S #	Construct	Sub Variable	Sources	Items
1	CRM adoption	Customer-centric Management CRM organization Operational CRM	(Reinartz et al., 2004; Sin et al., 2005; Lapierre, 2000; Reinartz et al., 2004; Croteau and Li, 2003 & Jayachandran et al., 2005)	40
2	Organisationnel Performance		Jaworski and Kohli 1993	2
3	Technological Turbulence		Jaworski and Kohli 1993	4
	Total			46

In table 2, the Chronbach Alpha values shows that data has been collected by using the above scales is reliable and can be used for further research.

Table 2: Reliability measures

Reliability Measures	Alpha
1.CRM adoption	
(i) Customer-centric Management	**0.860**
(ii) CRM Organization	**0.851**
(iii) Operational CRM	**0.929**
2. Organizational Performance	**0.847**
3. Technological Turbulence	**0.634**

Methodology

Data was analyzed using statistical analysis. Frequencies of demographics were calculated with correlation and regression analysis using SPSS. Correlation was performed to indentify the direction that exists between the dependent and independent variable and the regression analysis

was performed to study the strength/intensity of the independent variable over the dependent variable. Moderating regression analysis was performed in order to find the Moderation effect of Technological Turbulence on CRM adoption and Organizational performance.

Analysis and results

Table 3: Descriptive statistics

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Age	277	1	5	1.70	.889	.790
Gender	277	1	4	1.24	.452	.204
Education	277	1	5	2.03	.761	.579
Income	277	1	5	1.51	.769	.591

Table 3 is showing the mean, standard deviation and variance values of demographics and study variable. The mean value of Age is 1.70 and standard deviation value is .889, variance value of Age is .790. The mean, standard deviation and variance values of Gender are 1.24, .452 and .204 respectively. The mean, standard deviation and variance values of Education are 2.03, .761 and .579 respectively. The mean, standard deviation and variance values of Income are 1.51, .769 and .591 respectively.

Table 4: Correlation analysis

		CCM	CRM	OCRM	TT	OP
CCM	Customer Centric Management	1				
CRM	Customer Relationship Management	.781**	1			
OCRM	Operational CRM	.761**	.772**	1		
TT	Technological Turbulence	.416**	.441**	.472**	1	
OP	Organizational Performance	.192**	.137*	.279**	.181**	1

Table 4: Correlation analysis

		CCM	CRM	OCRM	TT	OP
CCM	Customer Centric Management	1				
CRM	Customer Relationship Management	.781**	1			
OCRM	Operational CRM	.761**	.772**	1		
TT	Technological Turbulence	.416**	.441**	.472**	1	
OP	Organizational Performance	.192**	.137*	.279**	.181**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4 is depicting the correlation analysis between variables. The value of correlation between Customer Centric Management (CCM) and Organizational Performance (OP) is .781** which is significant at 0.01 level. This value is showing that Customer Centric Management has a significant relationship between them. The value of correlation between Customer relationship management (CRM) and Organizational performance (OP) is 0.772* which is significant at the 0.01 level; this shows that there is a significant relationship between Customer relationship management (CRM) and Organizational performance (OP). The value of correlation between Operational CRM (OCRM) and Organizational Performance (OP) is 0.472** which is significant at 0.01 level, this result is depicting CRM (OCRM) and Organizational Performance (OP) have a significant negative relationship between them. The correlation value between Technological Turbulence (TechT) and Organizational Performance (OP) is 0.181**that is significant at 0.01 level, this result is portraying that technological turbulence has a significant relationship with Organizational Performance (OP).

Moderated regression analysis

In general terms, a moderator is a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable (Baron and Kenny, 1986 p.1176). According to them if the relationship between an independent and dependant variable is significant and they have a strong regression values, they are independent and dependant variables, and an intervening or moderator variable effects the significance between the relationship of independent and dependent when introduced.

1. Independent and Dependent Variables are regressed.
2. A Product Term of Independent and Moderator along with Independent and

Moderator itself was regressed with dependent variable.

Results of independent and dependent variables

Table 5: Customer-centric management is positively correlated with Organizational Performance

	Dependent Variable: Organizational Performance		
Variable	*B*	R^2	ΔR^2
Customer-centric Management	.055**	.096	.096**

** $P < .001$

The table 5 is linear regression analysis outcomes of Impact of Customer-centric Management on Organizational performance. The table containing Model Summary has important values which are needed to be reported which include R2. The R2 value of Independent and Dependent variable is 0.096. The regression analysis of Customer-centric Management (CCM) and Organizational Performance (OP) ($\beta = .055$, $p < .05$), shows that there is a significant and

positive relationship between Customer-centric Management (CCM) and Organizational Performance (OP). The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The Independent variable β value is 0.055 with a significance of 0.597 which is a significant effect. The β value of 0.055 shows that there is a positive effect of Independent variable on the Dependant variable and that effect is significant as 0.597 shows value of significance. This proves the relationship between Customer-centric Management and Organizational Performance. In a nontechnical terminology it can be said that Customer-centric Management has a positive effect on the organizational performance.

Table 6: CRM organization is positively correlated with organizational performance

	Dependent Variable: Organizational Performance		
Variable	***B***	R^2	ΔR^2
CRM Organization	-.214**	.096	.096**

** $P < .001$

The table 6 is linear regression analysis outcomes of Impact of CRM Organization on Organizational performance. The table containing Model Summary has important values which are needed to be reported which include R2. The R2 value of Independent and Dependant variable is 0.096. The regression analysis of CRM Organization and Organizational performance ($\beta = -.214$, $p < .05$), shows that there is a significant and positive relationship between CRM Organization and Organizational performance. The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The Independent variable β value is -2.14 with a significance of 0.025 which is a significant effect. The β value of -.214 shows that there is a positive effect of Independent variable on the Dependant variable and that effect is significant as 0.025 shows value of significance. This proves the relationship between CRM Organization and Organizational

Performance. In a nontechnical terminology it can be said that CRM Organization has a positive effect on the Organizational performance.

Table 7: Operational CRM is positively correlated with organizational performance

	Dependent Variable: Organizational Performance		
Variable	***B***	***R²***	**Δ*R²***
Operational CRM	.472**	.096	.096**

** $P < .001$

The table 7 is linear regression analysis outcomes of Impact of Operational CRM on Organizational performance. The table containing Model Summary has important values which are needed to be reported which include R2. The R2 value of Independent and Dependant variable is 0.096. The regression analysis of Operational CRM and Organizational performance ($\beta = .373$, $p < .05$), shows that there is a significant and positive relationship between Operational CRM and Organizational Performance. The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The Independent variable β value is 0.373 with a significance of 0.000 which is a significant effect. The β value of 0.373 shows that there is a positive effect of Independent variable on the Dependant variable and that effect is significant as 0.000 shows value of significance. This proves the relationship between Operational CRM and Organizational Performance. In a nontechnical terminology it can be said that Operational CRM has a positive effect on the Organizational performance.

Results of moderation variable (step wise)

Table 8: Technological turbulence moderates the relationship between customer-centric management and organizational performance

Customer-centric management and Technological Turbulence on Organizational Performance

Variable	**Constant**	***B***	R^2	ΔR^2
Step 1				
Customer-centric Management		.251**		.049***
Technological Turbulence	7.154	-.899***	.049	
Step 2				
CCM × TechT	3.273	-.912**	.075	.026**

* $P < .05$

** $P < .01$

*** $P < .001$

Table 8 is moderation regression analysis outcomes of Moderation of Technological turbulence between the relationship of Customer-centric Management and Technological Turbulence. The table containing Model Summary has important values which are needed to be reported which include R2and ΔR2 change. The R2value of Independent and Moderator variable is 0.049. The R2value of Independent, moderator and interaction term is 0.075. The ΔR2 change for independent and moderator variable is 0.049, The ΔR2 change for independent, moderator and Interaction term is 0.026. The interaction term for ccm * techt explains additional variance of 2%

(ΔR2 = .02, p <.01) above and beyond the main effects of customer-centric management and technological turbulence.

Table 8 contains information about Coefficients has some important values to report which include β value and Significance known as P value. The interaction term β value is -.866 with a significance of 0.017 which is a significant effect. The β value of -.866 shows that there is a negative effect of moderator on the relationship of Independent and Dependant variable and that effect is significant as 0.017 shows value of significance. This proves the moderation of Technological turbulence among the relationship between Technological Turbulence and Organizational Performance. In nontechnical terminology it can be said that technological turbulence has a negative effect on the association of customer-centric management and organizational performance. This means that technological turbulence will result in significant decrease in dependant variable, weakening the association linking customer-centric management and organizational performance, hence when there will be technological turbulence, organizational will go down despite high customer-centric management.

Table 9: Technological turbulence moderates the relationship between CRM organization and organizational performance

CRM Organization and Technological Turbulence on Organizational Performance

Variable	**Constant**	***B***	R^2	ΔR^2
Step 1				
CRM Organization		.158**		
Technological Turbulence	5.865	-.452***	.037	.037***
Step 2				
CRMO × TechT	3.483	-.476**	.051	.014**

* $P < .05$

** $P < .01$

*** $P < .001$

The table 9 is moderation regression analysis outcomes of Moderation of Technological turbulence between the relationship of CRM Organization and Organizational Performance. The table containing Model Summary has important values which are needed to be reported which include R2and ΔR2 change. The R2value of Independent and Moderator variable is 0.037, The R2value of Independent, moderator and interaction term is 0.51. The ΔR2 change for independent and moderator variable is 0.037, The ΔR2 change for independent, moderator and Interaction term is 0.014. The interaction term for crmo * techt explains additional variance of 2% (ΔR2 = .02, p < .01) above and beyond the main effects of CRM Organization and technological turbulence.

The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The interaction term β value is -.452 with a significance of 0.140 which is a significant effect. The β value of -.452 shows that there is a negative effect of moderator on the relationship of Independent and Dependant variable and that effect is significant as 0.140 shows value of significance. This proves the moderation of Technological turbulence among the relationship between CRM Organization and Organizational Performance. In nontechnical terminology it can be said that technological turbulence has a negative effect on the association of CRM Organization and Organizational Performance. This means that technological turbulence will result in significant decrease in dependant variable, weakening the association linking CRM Organization and Organizational Performance, hence when there will be technological turbulence, Organizational Performance will go down despite of organization is CRM oriented.

Table 10: Technological turbulence moderates the relationship between operational CRM and organizational performance

Operational CRM and Technological Turbulence on Organizational Performance

Variable	**Constant**	***B***	R^2	ΔR^2
Step 1				
Operational CRM		.141**		
Technological Turbulence	5.389	-.503***	.081	.081***
Step 2				
OCRM × TechT	3.200	-.539**	.094	.014**

* $P < .05$

** $P < .01$

*** $P < .001$

The table 10 is moderation regression analysis outcomes of Moderation of Technological turbulence between the relationship of Operational CRM and Organizational Performance. The table containing Model Summary has important values which are needed to be reported which include R2and ΔR2 change. The R2value of Independent and Moderator variable is 0.081, The R2value of Independent, moderator and interaction term is 0.94. The ΔR2 change for independent and moderator variable is 0.081, the ΔR2 change for independent, moderator and Interaction term is 0.014.

The interaction term for ocrm * techt explains additional variance of 2% (ΔR2 = .02, p < .01) above and beyond the main effects of operational CRM and technological turbulence. The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The interaction term β value is -.503 with a significance of 0.075 which is a significant effect. The β value of -.503 shows that there is a

negative effect of moderator on the relationship of Independent and Dependant variable and that effect is significant as 0.075 shows value of significance. This proves the moderation of Technological turbulence among the relationship between Operational CRM and Organizational Performance. In nontechnical terminology it can be said that technological turbulence has a negative effect on the association of Operational CRM and Organizational Performance. This means that technological turbulence will result in significant decrease in dependant variable, weakening the relationship between Operational CRM and Organizational Performance, hence when there will be technological turbulence, organization performance will go down despite high level of operational CRM.

Table 11: Technological turbulence has an impact on Organizational Performance

Technological Turbulence on Organizational Performance			
Variable	***B***	R^2	ΔR^2
Technological Turbulence	-.672***	.055	.055***

*** $P < .001$

The table 11 is linear regression analysis outcomes of Impact of Technological Turbulence on Organizational performance. The table containing Model Summary has important values which are needed to be reported which include R2. The R2 value of Independent and Dependent variable is 0.055. The regression analysis of Technological Turbulence and Organizational performance ($\beta = -0.672$, $p < .001$), shows that there is a significant and negative relationship between Technological Turbulence and Organizational performance.

The table containing information about Coefficients has some important values to report which include β value and Significance known as P value. The Independent variable β value is -0.672 with a significance of 0.041 which is a significant effect. The β value of -0.672 shows that there is a negative effect of Independent variable on the Dependant variable and that effect is significant as 0.041 shows value of significance. This proves the relationship between

Technological turbulence and organizational performance. In a nontechnical terminology it can be said that Technological turbulence has a negative effect on the Organizational Performance.

Discussion

The major contributions of this research are two-fold. First it is discussing the vital factors which can affect organizational performance, second a moderation effect of technological turbulence was taken into account and the results were mostly found to prove the existence of moderation. The model was tested using data collection from banking the sector in Pakistan. This article addresses principal hypothetical issues identified with CRM adoption in business to consumer markets. It helps the pertinent issues by re-conceptualizing the CRM developments, specifically with three main aspects of CRM customer-centric management which deals management related issues, CRM oriented organizations named as CRM organization and third is operational CRM which deals operationalization of the same.

The results show that CRM adoption has a significant effect on organizational performance. Further investigation of the effect of CRM adoption shows that it affects organizational marketing performance, but not financial performance. This result correlates with Sin et al. (2005) who also found a more favorable impact of CRM on marketing performance than on financial performance in B2C setting. Similarly, our results also endorse the finding of Boulding et al. (2005) who pointed out that, as other activities of a firm, CRM demonstrably enhances organizational performance. Accordingly, various studies have also focused on the impact of CRM applications on performance of organization (e.g. Reinartz et al., 2004; Ryals, 2005; Mithas et al., 2005). The authors claim that this not astonishing as CRM is grounded on the principles of relationship marketing, an affirmation with which we agree. Financial performance, on the other hand, is more likely to be indirectly improved through enhanced customer satisfaction by having better CRM implementation. Nevertheless, our findings support the conceptualization that CRM is a critical success factor for business performance in B2C organizations.

Also, technological turbulence is found to have a negative moderating effect on the relationship between CRM adoption and organizational performance. This finding also correlates with the

result of BT Abidemi, FB Halim & AI Alshuabi (2017) who pointed out in their study that technological turbulence has negative moderating effect on organizational performance. This shows when there is a technological turbulence in the market and organizations are not adapting it from current environment perspective then organizational performance will go down.

Conclusion

In conclusion, it is argued that by improving the understanding of the successful CRM adoption implementation is crucial in particular for marketing performance directly and financial performance indirectly. This study has clear managerial implications for the practitioners. A strong managerial implication of this study has been identified by the hypothesis and its result on CRM adoption and organizational performance relationship with moderation of technological turbulence. The organizational performance can be increased resulting in better financial returns, and larger market share accompanied with customer satisfaction. Therefore, managers can increase their organizational and financial performances by adopting this strategy of CRM implementation as per organizational requirement. Currently the practices and decision making is only focused on customer orientation in order to get better organizational performance. Now there is a need to look into another dimension including the moderating effect of technological turbulence.

The benefit of this study on the basis of individual relationship of sub-variables is that the deep and focused scenario of this relationship in the presence of a moderator is now recognized from the results of this research. Our findings support the reason for conducting individual relationship analysis, as we have identified a clear picture of variables that are significant and are in having an impact on relationship variance. In relation to our findings, it is suggested that our findings could be considered however this is not conclusive evidence across the markets and sectors. For this, we encourage new empirical studies in different markets and sectors to develop insights on the moderating effect of technological turbulence on firm performance. Additionally, there is also a need to replicate this study in the same scenario to assess decision making and responsive biases. Furthermore, adding on to this research, organizational performance can be used as a predictor of how well CRM adoption is in practice and loyalty of the customers to the service

providers. This study can be supported by case studies as well at individual organization of diverse service sectors.

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Appendix 1: Research questionnaire

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Customer Relationship Management (CRM) Adoption		
	(i) Customer-centric Management	
1	My organization is organized in a way to optimally respond to customer groups with different values.	1 2 3 4 5
2	My organization provides customized services and products to our key customers.	1 2 3 4 5
3	My organization has the ability to meet unique specifications for products not offered by competitor.	1 2 3 4 5
4	My organization has a formal system for determining which of our customers are of the highest value.	1 2 3 4 5
5	My organization emphasizes building and deepening relationships with high-value customers.	1 2 3 4 5
6	My organization is organized in a way to optimally respond to customer groups with different profitability.	1 2 3 4 5
7	My organization regularly assesses the lifetime value of each customer.	1 2 3 4 5
8	My organization can provide authentic customer information for quick and accurate customer interaction at every point of contact.	1 2 3 4 5
9	My organization is able to provide fast customer response because of integrated customer knowledge across several functional areas.	1 2 3 4 5
10	My organization is able to provide fast decision making due to customer knowledge availability/precision.	1 2 3 4 5
11	My organization can generally predict future customers' expectations.	1 2 3 4 5
12	My organization fully understands the needs of our key customers via knowledge learning.	1 2 3 4 5
13	My organization provides channels to enable ongoing two-way communication with our key customers.	1 2 3 4 5
14	In my organization, relevant employees always have access to up-to-date customer information.	1 2 3 4 5
	(ii) Customer Relationship Management (CRM) Organization	
15	My organization has the sales and marketing expertise and resources to succeed in CRM.	1 2 3 4 5
16	Our organizational structure is in alignment with CRM and designed around our customers.	1 2 3 4 5
17	We organize our company around customer-based groups rather than product or function-based groups.	1 2 3 4 5
18	CRM is regarded as a high priority by top management.	1 2 3 4 5
19	Top management perceives CRM to be part of the organization's vision.	1 2 3 4 5
20	My organization has established clear business goals related to customer acquisition, development, retention, and reactivation.	1 2 3 4 5
21	Top management contact with executives on CRM related issues is frequent.	1 2 3 4 5
22	Our employee training programs are designed to develop the skills required for acquiring and deepening customer relations.	1 2 3 4 5

23	Employee performance is measured and rewarded based on meeting customer needs and on successfully serving the customer.	1 2 3 4 5
24	In my organization, employees receive incentives based on customer satisfaction measures.	1 2 3 4 5
	(iii) Operational Customer Relationship Management	
25	My organization has the right hardware to serve our customers.	1 2 3 4 5
26	My organization has the right software to serve our customers.	1 2 3 4 5
27	My organization possesses a good IS and telecommunications infrastructure.	1 2 3 4 5
28	My organization possesses the necessary infrastructure to capture customer data from all customer interaction points.	1 2 3 4 5
29	My organization has the ability to consolidate all acquired customer related data and maintains a comprehensive database.	1 2 3 4 5
30	Customers can expect accurate and reliable processing of orders.	1 2 3 4 5
31	Customers can expect speedy order confirmation.	1 2 3 4 5
32	Customers can expect exactly when and how orders will be delivered.	1 2 3 4 5
33	Customers can effortlessly reach personnel about their complaints.	1 2 3 4 5
34	Customers can expect quick reaction to complaints and service.	1 2 3 4 5
35	Customers can expect exactly when and how complaints will be handled.	1 2 3 4 5
36	Customers can reach relevant technical/production/operation personnel when required.	1 2 3 4 5
37	Customers can expect prompt service from technical/production/operation in my organization.	1 2 3 4 5
38	The technical/production/operation people treat customers with great care.	1 2 3 4 5
39	Customer interaction at all points is used to ensure providing the best possible customer service.	1 2 3 4 5
40	Customer interaction is used to learn customer expectations.	1 2 3 4 5
Technological Turbulence		
41	The technology in our industry is changing rapidly.	1 2 3 4 5
42	Technological changes provide big opportunities in our industry.	1 2 3 4 5
43	It is very difficult to forecast where the technology in our industry will be in the next 2 to 3 years.	1 2 3 4 5
44	A large number of new product ideas have been made possible through technological breakthroughs in our industry.	1 2 3 4 5
Organizational Performance		
1=Poor	**2=Bad** **3= Average** **4= Good** **5=Excellent**	
45	Overall performance in our business unit last year was.	1 2 3 4 5
46	Relative competition, overall performance in our business unit last year was.	1 2 3 4 5