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Moderating Impact of Environmental Turbulence on Relationship between Business Innovation and Business Performance

Mirza Waseem Abbas (Corresponding author)
Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Islamabad, Pakistan
Email: wazeem.mirza@gmail.com

Masood ul Hassan
Department of Commerce, Bahauddin Zakariya University, Multan, Pakistan
Email: masoodulhassan99@gmail.com

Abstract

The importance of Pakistan's Tourism sector has increased manifold due to economic activities under China Pakistan Economic Corridor (CPEC) initiative. However, it has been in crisis phase due to the influence of the war on terror and other administrative issues. This paper is an effort to analyze the impact of environmental turbulence on the relationship between Customer Relationship Management effectiveness (CRMe'), business innovation and business performance in organizations comprising tourism sector. Responses from 382 respondents were collected through a questionnaire. The analysis is done using Structural Equation Modeling (SEM) through Amos software. It is observed that all the moderating effects on hypothesized relations are statistically significant. In other words, technological turbulence and competitive intensity weaken (strengthen) the relation of CRMe' with business innovation and business performance. While, market turbulence strengthens (weakens) the said relation. The outcomes of this study will help stakeholders in understanding the market forces and their impact on innovation and business performance in a better way to prepare themselves for the varied challenges of CPEC.

Keywords: CRM effectiveness, environmental turbulence, business innovation, technological turbulence, market turbulence, competitive intensity.

1. Introduction

There is a consistent and regular increase in the demand for tourism and travel as more and more employed and working classes from developing economies express increased willingness to spend on travel, both domestic and international (Economic Impact Pakistan, 2014). The hospitality and tourism industry works in a highly competitive environment. Organizations working in this sector are vibrant, complex and segmented. Companies all around the world, in this era are experiencing a rapidly evolving and challenging market environment where products having shorter life cycles, rapidly growing technology market and customer demands are becoming complex, customized and diverse (Shephard & Ahmed, 2000). Challenging sales environments and rapidly changing technology places major pressure on these organizations to manage their resources through effective strategic management and development (Blumentritt & Danis, 2006). Customers being the prime focus of every organization, maintaining good relations with customers are essential and important for success. These relations affect and get affected directly by organizations and provide competitive advantage by adapting to the changes in environment and meeting future needs (Jones, 1995). This leads to the premise that in maintaining a relatively stable course for the organization and thus, ensuring its survival and sustainability in the long run and in the presence of disrupting environmental and market factors, organizations may build resilience (Powley, 2009; Bhamra et al., 2011; Dalziell & McManus, 2004; Staber & Sydow, 2002).

For sustainability in growth, continuous learning from within and outside the organization is very essential (Kamal & Abbas, 2011). This creates business resilience that has a significantly positive influence on the effectiveness of Customer Relationship Management efforts that leads to better business performance and innovation (Abbas & Hassan, 2016).

The model discussed in this research draw its basics inspiration from contingency theory, systems theory and stakeholder theory because, service industry specifically (tourism & hotel) characterized by cut throat competition, cannot operate apart from the external environment, ensuring consistency of internal systems with external systems and influence of stakeholders.

1.1 Objective of the Study

The objective is to analyze the moderating impact of Market Turbulence, Technological Turbulence and Competitive Intensity on the relationship of Customer Relationship Management effectiveness with business innovation and business performance in organizations comprising tourism sector in Pakistan.

1.2 Significance of the Study

This study has tried to highlight a serious concern regarding organizations working under the umbrella of tourism sector of Pakistan in the context of upcoming challenges of CPEC in the shape of more competition, price war, technological boom etc. Previous studies have failed to highlight such an important sector of Pakistan's economy and its challenges, whose contribution grew from 6 % towards Gross Domestic Product (GDP) in 2007 to 7.3 % in 2014 (Economic Impact Pakistan, 2014). The study of impact of environmental turbulence on the performance and increased innovation capacity of organizations comprising tourism sector, adds value to this study. Therefore, it will provide insight about the impact of environmental turbulence on business innovation and business performance to the stakeholders i.e. government, policy makers, hotels, tour operators etc.

2. Literature Review

2.1 Contingency Theory, Systems Theory and Stakeholder Theory

The formation of conceptual framework has its roots in contingency, system and stakeholder theories. Basis of contingency theory can be traced back to early literature of organizational theory (Lawrence & Lorsch, 1967; Pugh et al., 1968; Van de Ven &

Delbecq, 1974; Van de Ven, 1976; Galbraith, 1977). For organizations, the best structure is the one that is contingent upon the external environment in which they exist. There is a strong relationship between environment, organizational structure and performance. (Williams et al., 2016). A dynamic organization working in uncertain and turbulent environment is the one that is more flexible, greater adaptive capacity and innovation oriented (Ruekert et al., 1985; Adler, 1967; Hunt, 1976; Johnston & Hunt, 1977). For firms to survive and sustain the increasing environmental complexities and uncertainties, systems (firms) need to increase their complexities as per the external environment (Schneider et al., 2016). Therefore, it is assumed that firms tend to adjust themselves to increasing complexities of environment by modifying their processes, structures, routines and rules (Daft & Lengel, 1986; Scott, 1992). It is inferred that organizations performs much better in a situation when organizational priorities coincide with market environment (Lawrence & Lorsch, 1967; McAdam et al., 2016; Otley, 2016).

The conceptual framework discussed in this study draws its inspirations from systems theory as well. Per systems theory, firms working as a close system have their prime focus on internal activities and have very limited interaction with environment. However, there is no such system that is isolated or perfectly closed from environment. This theory considers organization as a system that can be close or open. However, majority of approaches consider firm as an open system that interact with its prevailing environment through inputs and outputs (Johnson et al., 1964; Von Bertalanffy, 1968). Therefore, it can be said that firms are considered as open systems and they cannot isolate themselves from external environment (Von Bulow, 1989; Pieper & Klein, 2007; Schneider et al., 2017).

Customer satisfaction is a continuous target of the organization because it affects the business and performance too. The only way to do this is to pay attention to what the customer is saying and incorporating that into the product or service being offered, because achieving customer satisfaction is the core objective for any organization (Lau, 2011). From instrumental view of stakeholder theory, stakeholder (customers, suppliers, regulatory agencies) relationship management is the most important and influential factor that can affect organization’s systems, structures, product design, performance, competitive advantage, innovation and direction (Hillebrand et al., 2015; Kull et al., 2016). The major focus of this theory is to consider the entities (individual, group) that can influence or be influenced by organization’s objectives and management (Freeman, 1984).

2.2 CRM Effectiveness (CRMe’), Business Performance, Innovation & Environmental Turbulence (Market, Technological & Competitive Intensity)

As per contingency, systems and stakeholder’s theories, organizations cannot be studied without analyzing the impact of external environment in which they operate (Hofer, 1975; Feldman, 1976; Lawrence & Lorsch, 1967; Johnson et al., 1964; Von Bertalanffy, 1968; Von Bulow, 1989; Jones, 1995). There are seven environmental turbulence factors that are usually out of the control of management of any company, identified in literature (Sharifi & Zhang, 2001). These include technological turbulence, market and competitive intensity (Kohli & Jaworski, 1990; Jaworski & Kohli, 1993). Moreover, suppliers, product diversity, social factors and customer’s diversity are also identified as environmental turbulence factors. Environmental turbulence as defined by (Calantone et al., 2002), is the environment characterized by unpredictable and frequent technological and/or market changes in the industry posing risk and insecurity to every process of product or service development. There is a visible link between CRM effectiveness, innovation, performance and turbulence in the external environment (Kohli & Jaworski, 1990). The rate and variedness of change in technology is called technological turbulence. Research proves that capacity and ability of a firm and an industry is fundamentally dependent on technology to ensure effective operations maintain competitive integrity (Poon, 1993). Market and technological turbulence tend to reallocate opportunities, alter industrial standing and redistribute power within the industry and among the players (Wellman & Berkowitz, 1988). On the other hand, organizations with technologies that are quite stable tend to be relatively poorly positioned to leverage technology to attain competitive advantage (Kohli & Jaworski, 1990). Continuously ignorance of organization from technological changes will affect it performance in delivery products and services to customers (Lengnick-Hall & Wolff, 1999).

There is a significant impact of customer relationship on project success and positively significant impact of technological turbulence as moderator (Voss & Kock, 2013). Using a sample size of 162, it is reported that technological turbulence has a significant moderating effect on the relationship between supplier market orientation and customer satisfaction (Terawatanavong et al., 2011). In the study of Wang and Feng (2012), a substantial moderating impact of market, technological and competitive intensity, was reported between quality management practices and business performance. It is also reported that organizations performance boosts up in highly turbulent markets (Yauch, 2010). However, an insignificant moderating impact of competitive intensity, market and technological turbulence has been found between business performance and organizational best practices (Inman et al., 2011; Dean Jr & Snell, 1996). Market turbulence and competitive intensity, weakens the relationship between business performance and market orientation (Jaakkola, 2015; Chong, Bian, & Zhang, 2016). Environment turbulence negatively influences the relation between export-orientation and export performance (Cadogan et al., 2003). Firms operating in technologically turbulent environment, facing moderate competitive intensity, tend to collaborate more that ultimately leads to growth. Similarly, those facing intensive competition in less technologically turbulent surroundings, collaborate more that eventually leads to better performance and growth of the firm (Ang, 2008). There is a weak moderating impact of competitive environment on business performance and market orientation relationship (Slater & Narver, 1994). In turbulent markets, where there is cut-throat competition, innovation capability and business performance increases due to enhanced competitive advantage over rivals (Shan & Jolly, 2013; Camisón & Villar-López, 2014). In turbulent markets, where the market is characterized by frequent changes in customer needs and preferences (Wilden & Gudergan, 2014), organizational performance increases (bin Zainuddin, 2017). Similarly, firms operating in technologically turbulent environments, where technology rapidly becomes obsolete, organizational performance also increases (bin Zainuddin, 2017).

In the light of above literature review, following hypotheses are proposed for this study;

- **H_{1a}:** Technological Turbulence moderates the relationship between CRMe and innovation,
- **H_{1b}:** Technological Turbulence moderates the relationship between CRMe and business performance,
- **H_{2a}:** Relationship between CRMe and innovation is moderated by Market Turbulence,
- **H_{2b}:** Relationship between CRMe and business performance is moderated by Market Turbulence,
- **H_{3a}:** Competitive Intensity moderates the relationship between CRMe and innovation,
- **H_{3b}:** Relationship between CRMe and business performance is moderated by competitive intensity,

3. Conceptual Framework

The conceptual model draws its basic foundations from contingency, stakeholder and system theory. It is based on conceptualizing the concept of business resilience through CRMe, postulating that the effectiveness of CRM initiatives within organizations translates to focus on customer relationships of prime importance for organizations. This CRM effectiveness has a significant, positive relationship with business performance and innovation (Abbas & Hassan, 2016). The proposed framework of this research extends this model by analyzing the influence of environmental turbulence on the relationship between CRMe, innovation and business performance. Thus, this model hypothesizes the position of environmental turbulence moderating the relationship between CRMe', innovation and business performance. For the purpose of operationalizing environmental turbulence, moderating impact of technological turbulence, market turbulence and competitive intensity have been studied.

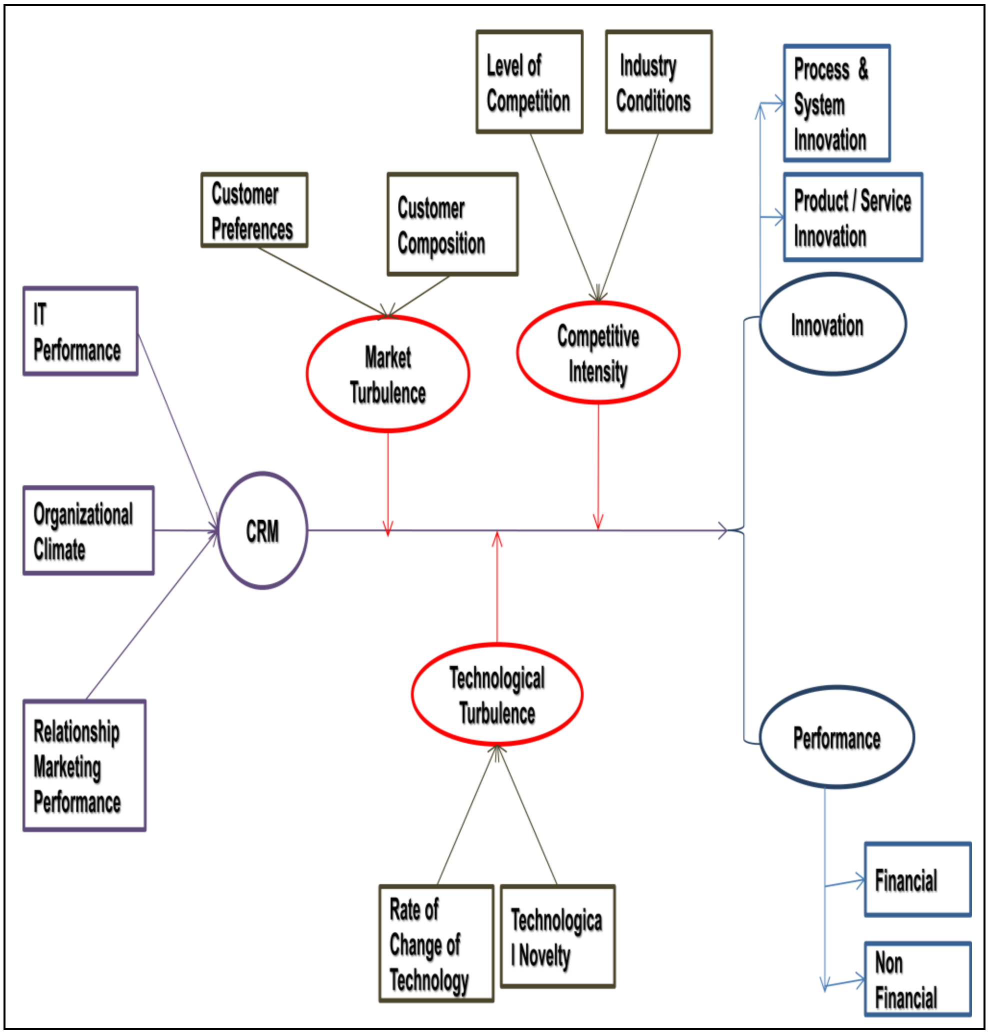

Figure 1: Conceptual Framework

4. Research Methodology

4.1 Sample Selection

The primary data were collected with the help of self-administered questionnaire. Each variable was measured with five questions against the Likert Scale from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was adopted from (Calantone et al., 2002; Kohli & Jaworski, 1990; Ahmed & Shepherd, 2000; Somers, 2009). The sample was selected using sample selection formula N=$\frac{z^2 pq}{e}$ presented in the research article (Israel, 1992). The reason for adopting this formula was mainly because of large population with unknown variability assuming p=0.5. Based on this adopted formula for sample selection, initially 390 questionnaires were distributed among respondents. However, after filtering out ambiguities in some of the received questionnaires, 382 responses were selected for analysis.

4.2 Analysis and Results

Table 1: Reliability Analysis Statistics

Variable Name/Factor	Description of Factors/Indicator	CFI	Factor Loading	Scale-Reliability (Cronbach Alpha)	Composite Reliabilities	Average Variance Extracted
Innovation	Product/Service Innovation	0.96	0.60	0.79	0.79	0.69
	System Innovation		0.56			
	Process Innovation		0.96			
Business Performance	Return on Assets	0.94	0.74	0.78	0.91	0.72
	Competitive Advantage		0.62			
	Return on Investment		0.89			
Technological Turbulence	Rate of Change of Technology	0.91	0.64	0.72	0.88	0.65
	Technological Novelty		0.71			
	Adaption Rate		0.83			
Market Turbulence	Customer Preference	0.95	0.63	0.79	0.90	0.72
	Customers Composition		0.76			
	Regulatory Agencies		0.69			
Competitive Intensity	Level of Competition	0.92	0.74	0.76	0.85	0.68
	Industry Conditions		0.67			
	Competitive Density		0.83			

For data fitness, reflective multi-item measures; Cronbach's alpha, Composite Reliabilities and Average Variance Extracted were analyzed individually. Cronbach's alpha value of all nine variables is more than the recommended value of 0.70 (Hair et al., 2010). Comparative Fit Index (CFI) value of more than 0.91 for dimensions demonstrate that a satisfactory uni-dimentionality of data (Hatcher, 1994). In the above table, significant factor loadings ranging from 0.56 to 0.99, of indicators, validates the strong convergent validity (Bagozzi et al., 1991). Similarly, for reliability and validity of the data, composite reliability (CR) and average variance extracted (AVE) were also analyzed. The values for CR ranging from .73 to .90 and statistical values for AVE for all cases exceeded the threshold value of .5, indicating a reliable, consistent and valid data for further analysis.

Table 2: Assessment of Normality

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
CRME	1.571	5.000	-.580	-1.631	.993	1.961
BP	1.000	5.000	-.704	-1.618	2.075	1.277
INN	1.600	5.000	-.510	-1.067	1.919	1.656
Multivariate					2.144	1.120

For normal uni-variate distribution, the values between -2 and +2 for asymmetry and kurtosis are considered acceptable to attest normality of data (George & Mallery, 2005). From the table above it is evident that values for skewness and kurtosis are in the acceptable range hence indicating that the data is normally distributed and can be used for further analysis.

Table 3: Summary Statistics of Model Fit

Fit Index	Threshold Values for Fit Indices (Hu & Bentler, 1999)	Observed values
Chi-square/ degrees of freedom	≤3.00	< 2.324
GFI	≥0.95	>0.976
AGFI	≥0.80	>0.901
NNFI	≥0.90	> 0.969
CFI	≥0.90 or ≥0.95	>0.968
RMSEA	≤0.05 or ≤0.08	<0.0381

Note: GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.($P<.001$)

Confirmatory factor analysis was carried out in order to determine the consistency level of theory driven factorial model by comparing it with the real data. As per rule of thumb established by (Hu & Bentler, 1999), value for (Chi-square / degrees of freedom), should be less than or equal to 3. Chi-squared test signify the difference between observed and expected covariance matrices. Values that are closer to zero specify a better model fit; smaller variation between expected and observed covariance matrices (Gatignon, 2003). The observed value for the conceptual model was <2.324, that makes it in acceptable range.

The goodness of fit index (GFI) is a measure of fit between the hypothesized model and the observed covariance matrix. The adjusted goodness of fit index (AGFI) corrects the GFI, which is affected by the number of indicators of each latent variable. The GFI and AGFI range between 0 and 1, value of over .9 normally signify acceptable model fit (Hooper, et al., 2008). Observed value of GFI for the sample is >0.976 while for AGFI >0.901 placing them in acceptable range.

The non-normed fit index (NNFI), resolves some of the issues of negative bias, though NNFI values may sometimes fall beyond the 0 to 1 range. In above mentioned table, the observed value for NNFI is > 0.969 that indicates a better fit (Gatignon, 2003).

The comparative fit index (CFI), analyzes the model fit by examining the discrepancy between the data and the hypothesized model, while adjusting for the issues of sample size inherent in the chi-squared test of model fit, and the normed fit index. CFI values range from 0 to 1, with larger values indicating better fit (Teo & Khine, 2009). Observed value of CFI is >0.968, that makes the model fit for further analysis.

The root mean square error of approximation (RMSEA), avoids issues of sample size by analyzing the discrepancy between the hypothesized model, with optimally chosen parameter estimates, and the population covariance matrix. It value ranges from 0 to 1, smaller the values, better is the model fitness. A value of .06 or less is indicative of acceptable model fit (Hooper, et al., 2008). Therefore, all goodness-of-fit indices for the conceptual model were in the acceptable range.

Table 4: Correlations Statistics

		CRMe	INN	BP	MT	CI	TT
CRMe	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	382					
INN	Pearson Correlation	0.530**	1				
	Sig. (2-tailed)	0					
	N	382	382				
BP	Pearson Correlation	0.546**	0.731**	1			
	Sig. (2-tailed)	0	0				
	N	382	382	382			
MT	Pearson Correlation	0.437**	0.513**	0.738**	1		
	Sig. (2-tailed)	0	0	0			
	N	382	382	382	382		
CI	Pearson Correlation	0.447**	0.668**	0.487**	0.508**	1	
	Sig. (2-tailed)	0.372	0.193	0.699	0.322		
	N	0382	382	382	382	382	
TT	Pearson Correlation	0.551**	0.484*	0.539**	0.566**	0.508*	1
	Sig. (2-tailed)	0.619	0.345	0.868	0.74	0.494	
	N	382	382	382	382	382	382

Note: **Correlation is significant at the .01 level (2-tailed).

Correlation test was conducted on the given data to analyze the possible relation among the variables. Table no. 4 shows the correlation statistics and all the variables of interest.

Correlation statistics exhibits three fundamental characteristics: a). Direction (+ or -) signs, b). Strength i.e. values between 0 (no consistency) and 1 (perfect consistency), c). Non-monotonic relation (Zikmund, 2003).

The correlation statistics values indicate that CRMe has moderately strong positively significant relationship with business innovation (r=.530; p<.01). This implies that with effective CRM, business innovation increases in that organization. CRMe has moderately strong significantly positive relationship with business performance (r=.546; p<.01); means effective CRM implementation leads to better business performance. Similarly, CRMe has a relatively less strong positive relation with market turbulence (r=.437; p<.01); implying that CRMe increases in a market condition that is highly turbulent. In the same vein, correlation stats indicate that CRMe has moderately low and significantly positive relationship with competitive intensity (r=.447; p<.01); which implies that in competitively insensitive market scenario, CRMe increases as well.

While with technological turbulence, CRMe shows relatively strong and significantly positive relationship (r=.551; p<.01).

Similarly, business innovation have significantly positive relationship with other variables i.e. BP, MT, CI & TT (r ranging from .731 to .481; p<.01). Likewise, BP shows strong significantly positive relationship with MT (r=.738; p<.01). On the other hand, MT shows moderately strong positive correlation with CI & TT with value (r=.508; p<.01), (r=.566; p<.01) respectively. In conclusion, all the variables of interest showed significantly positive correlation with each other (linear linkages) with a strength varying from moderate to strong.

4.3 Moderation Test

For moderation analysis of the model under discussion, multi-group structural equation modeling within AMOS was applied (Hair et al., 2010). The sample was divided into two subsamples along the median of each moderating variable. Chi-square difference test between the nested models (baseline/un-constrained model and constrained model) was used to investigate the influence of moderating variables; technological and market turbulence and competitive intensity. The model that allows estimates/path coefficients to vary across the two sub-samples is known as Baseline/Un-constrained in the literature (Zweig & Webster, 2003). On the other hand, model that limits the relevant estimates to be equal across the two sub-samples is known as constrained model (Ahmad et al., 2010). To get measurement equivalence, the two sub-groups were subject to invariance measurement by equating factor loadings in the said sub-groups (Williams et al., 2003). The results were satisfactory (Table No. 5), as it did not lead to significant decline in model fitness of the sub-groups. For these nested models, Chi-square value is always higher for the constrained model as compared to un-constrained model. Significant increase in Chi-square value indicates moderating effect (Kemper et al., 2013).

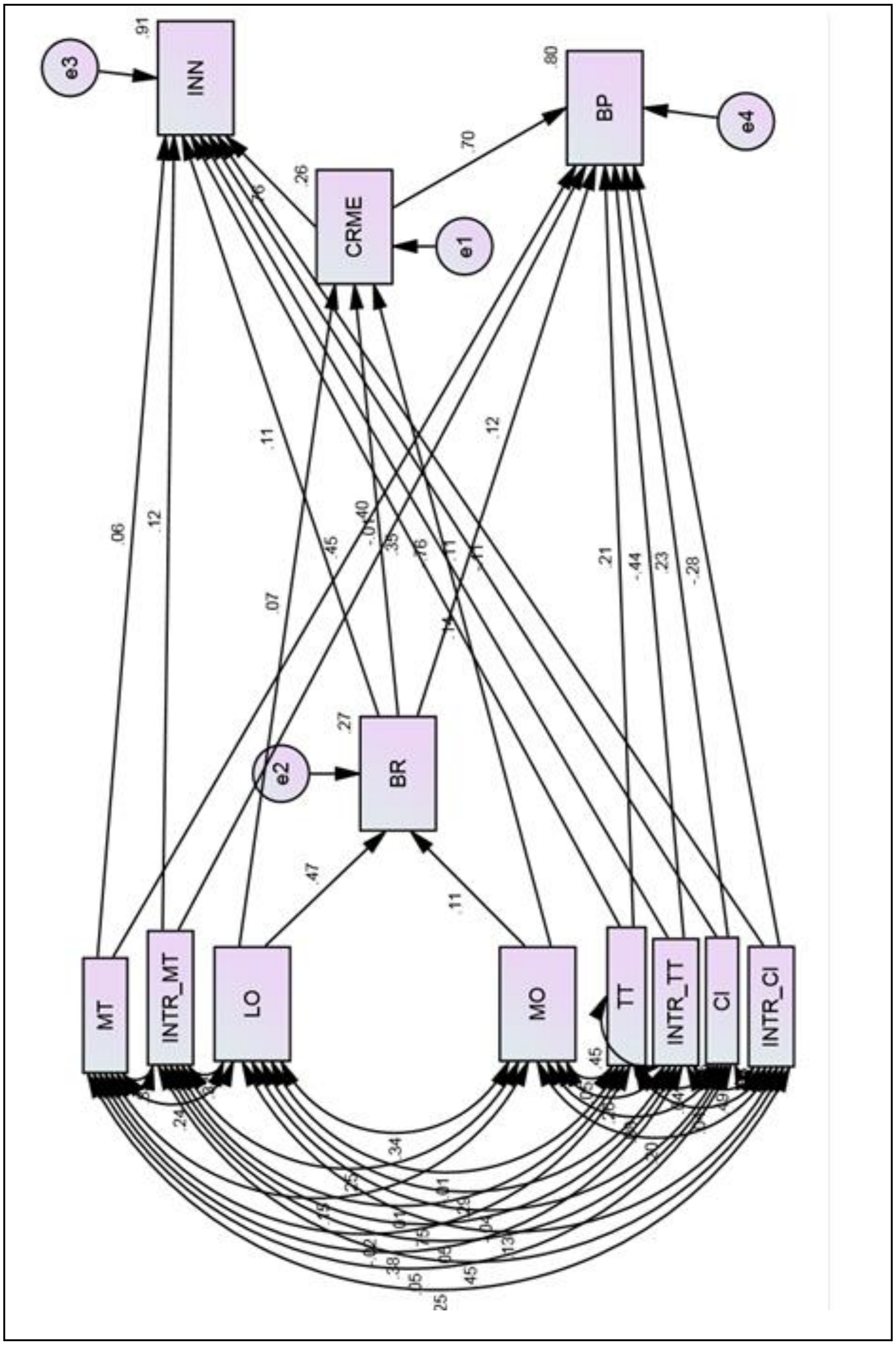

Figure 2: Overall Moderating Model

Overall conceptual model of this research is presented in figure 2. This model includes moderating variables as well. In this figure CRM effectiveness has a positive & significant relationship with innovation (β=.26, *p<.001*) and with performance (β=.70, *p<.001*) respectively. These two relationships are affected by the inclusion of moderation variables i.e. marketing turbulence, technological turbulence and competitive intensity. The impact of moderating variables can be seen in table 5.

Table 5: Results of Moderation Analysis

H	**Relationship**	**Moderator Variables**	**Low Value of Moderator (Standardized Co-efficient)**	**High Value of Moderator (Standardized Co-efficient)**	**X^2 Difference (Δd.f = 1)**
H_1a	CRMe → Innovation	Technological Turbulence	$\beta_1 = 0.255$	$\beta_2 = 0.488$	X^2_{diff} = 84.8 ***
H_1b	CRMe → Business Performance		$\beta_1 = 0.383$	$\beta_2 = 0.493$	X^2_{diff} = 71.8 ***
H_2a	CRMe → Innovation	Market Turbulence	$\beta_1 = 0.344$	$\beta_2 = 0.287$	X^2_{diff} = 64.1 ***
H_2b	CRMe → Business Performance		$\beta_1 = 0.317$	$\beta_2 = 0.299$	X^2_{diff} = 51.6 ***
H_3a	CRMe → Innovation	Competitive Intensity	$\beta_1 = 0.187$	$\beta_2 = 0.233$	X^2_{diff} = 83.7 ***
H_3b	CRMe → Business Performance		$\beta_1 = 0.331$	$\beta_2 = 0.415$	X^2_{diff} = 89.6 ***

4.4 Analysis of Moderation Results

Moderation analysis results revealed that, relationship between CRM, innovation and business performance tend to be stronger in market characterized by highly technological turbulence. From the above table, technological turbulence positively and significantly moderates the relationship between CRMe and Innovation as (H_{1a} - $\beta_1 = 0.255$) is lower than (H_{1a} $\beta_2 = 0.488$) with ($X^2_{diff} = 84.8$, *$p<.001$)*. Similarly, technological turbulence moderates the relationship positively and significantly between CRMe and business performance as (H_{1b} - $\beta_1 = 0.383$) is lower than (H_{1b} - $\beta_2 = 0.493$) with ($X^2_{diff} = 71.8$, *$p<.001$)*. Therefore, hypotheses H_{1a} and H_{1b} were accepted. In other words, rapid changes in technology has a positive influence on innovation and business performance and leads to increased innovation and improved business performance in the context of CRMe.

In the same way, the relationship between CRMe, innovation and business performance will be weaker in turbulent markets. Hypotheses H_{2a} and H_{2b} were rejected based on results shown in table no.5. The standardized co-efficient values for proposition H_{2a} of market turbulence is higher in low value moderator (H_{2a}-$\beta_1 = 0.344$) as compared to high value moderator (H_{2a}-$\beta_2 = 0.287$) with ($X^2_{diff} = 64.1$, *$p<.001$)*. Similarly, for proposition $H_{2b,}$ standardized co-efficient values are high in low value moderator (H_{2b}-$\beta_1 = 0.317$) as compared to high value moderator (H_{2b}-$\beta_2 = 0.299$) with ($X^2_{diff} = 51.6$, *$p<.001$)*. Therefore, it can be argued that firms will innovate and perform better because of CRMe in the market where customer preferences, their composition and rules of regulatory agencies do not change so frequently.

Hypotheses H_{3a} and H_{3b} were also accepted on the grounds of results in table no.5. The relationship between CRMe, innovation and business performance will tend to be stronger in markets where there is immense competition. Table above shows that competitive intensity positively and significantly moderates the relationship between CRMe and Innovation as (H_{3a} - $\beta_{1} = 0.187$) is lower than (H_{1a} $\beta_{2} = 0.233$) with ($X^2_{diff} = 83.7$, *$p<.001$*). Similarly, competitive intensity moderates the relationship positively and significantly between CRMe and business performance as (H_{3b} - $\beta_{1} = 0.331$) is lower than (H_{3b} - $\beta_{2} = 0.415$) with ($X^2_{diff} = 89.6$, *$p<.001$*). Therefore, hypotheses H_{3a} and H_{3b} are accepted. In other words competitive intensity positively moderated the relation between CRMe, business innovation and business performance.

5. Discussion

Moderation analysis was conducted to determine variation in the intensity of the relationship between two variables in the presence of a moderator. Turbulent variables of technology, market and competition were presumed to moderate the intensity of the relationships between CRM effectiveness, innovation and business performance. Results showed that the relationship between these variables tend to be stronger in market characterized by high technological turbulence. Comparable results also showed that organizations tend to be more innovative and show better performance where the competition is intense. However, the relationship was insignificant where markets tended to turbulent therefore, it can be argued that firms will innovate and perform better because of CRMe in the market where customer's preferences, their composition and rules of regulatory agencies do not change so frequently. Moderating variables of this study were technological turbulence, market turbulence and competitive intensity. These variables have been discussed in previous literature as moderating variables but in slightly different contexts. The results of this study are supported by the literature. For example, technological turbulence and competitive intensity have been used as moderating variables in the framework of social capital and business performance. These two moderators significantly enhance business performance (Kemper et al., 2013). Similarly, environmental turbulence and competitive intensity have been discussed as moderating variables in the context of innovation and performance (Hung & Chou, 2013; Garcia-Zamora & Gonzalez-Benito, 2013; Su et al., 2013; Bodlaj et al., 2012). In this study, these moderating variables have been investigated in a context slightly different to the literature. These variables are discussed as moderators between the relationship of CRMe, innovation and business performance.

Table 6: Theoretical Support

Proposition	Findings	Literature Support	Reference
Technological Turbulence moderates the relationship between CRMe and innovation	Accepted	Supported	Chong, Bian, & Zhang, 2016; Jaakkola, 2015; Hung & Chou, 2013; Garcia-Zamora & Gonzalez-Benito, 2013; Kemper et al., 2013; Su et al., 2013; Bodlaj et al., 2012
Technological Turbulence moderates the relationship between CRMe and business performance	Accepted	Supported	
Market Turbulence moderates the relationship between CRMe and innovation	Rejected	Supported	Slater & Narver, 1994; Inman et al., 2011; Dean Jr & Snell, 1996
Market Turbulence moderates the relationship between CRMe and business performance	Rejected	Supported	
Competitive intensity moderates the relationship between CRMe and business performance	Accepted	Supported	Shan & Jolly, 2013; Camisón & Villar-López, 2014; bin Zainuddin, 2017; Voss & Kock, 2013; Kemper et al., 2013; Su et al., 2013; Bodlaj et al., 2012
Competitive intensity moderates the relationship between CRMe and business performance	Accepted	Supported	

Therefore, it can be said in the light of above findings that, CRMe proactively uplift innovation and overall business performance in a market where new technology is readily available and presence of intense competition among the organizations working under the umbrella of tourism sector in Pakistan. Healthy competition and novel technology promotes business innovation and business performance (Chong, Bian, & Zhang, 2016; Jaakkola, 2015; Ang, 2008; Shan & Jolly, 2013; Camisón & Villar-López, 2014; bin Zainuddin, 2017; Voss & Kock, 2013).

On the other hand, the market where customer's preference, needs, demands, government rules and regulations tend to change frequently, effectiveness of customer relationship management diminishes and it reflects in poor business performance and reluctance in innovating activities (Slater & Narver, 1994; Inman et al., 2011; Dean Jr & Snell, 1996). In the light of findings, organizations comprising tourism sector of Pakistan, working in a market that is highly volatile, where customer's needs, preferences, governing rules and regulations are being changed frequently, CRMe has negative impact on business performance and innovation in this scenario. The propositions ($H2_a$ & $H2_b$) are rejected and supported by the literature (Slater & Narver, 1994; Inman et al., 2011; Dean Jr & Snell, 1996).

6. Contribution and Future Research

Previous studies have analyzed the impact of environmental turbulence on different variables and relationships in different organizational settings. This study has tried to analyze the effect of environmental turbulence on the relationship of CRMe' with business performance and innovation. The outcomes of this study are similar to the previous researches however, CRM effectiveness and its relationship with business innovation and performance has never been studied in the context of environmental turbulence before especially in the most neglected sector of Pakistan's economy i.e. tourism.

Customer Relationship Management or CRM has been repeatedly studied in the context of marketing and more specifically, social and relationship marketing. It is generally assumed and understood to be a pure marketing dynamic and its wider theoretical and practical contribution to overall business performance is generally ignored. This paper is a significant effort in connecting CRM to the wider organizational model of performance and innovation and adds to the systems theory of organizational management through looking at the "effectiveness" of the collective CRM effort.

It is generally understood that CRM efforts and the system have a relationship with business performance. The contingency theory suggests that the effectiveness of the system can be affected by environmental factors outside of the organization's general control and therefore, have an effect on the overall performance and innovation capabilities of an organization. However, relationship discussed in this paper between CRM effectiveness, business innovation and performance moderated by multiple forms of environmental turbulence factors, is an attempt to add to the knowledge on contingency theory.

Previous researches have only focused on building CRM concepts, models and processes. However, current study has contributed to integrative ideas to explain how relationships (with all stakeholders) work and how CRM impacts overall organizational decision making. Scholars have also looked at how various individual construct affects the overall CRM process. This research contributes to the stakeholder's theory and process models of CRM by making the effectiveness of the system integral to the measurement of the overall impact on business performance and innovation.

For practitioners, this model and the outcomes of this study may serve as guide to all the stakeholders including policy makers, relevant administrative departments and individual organizations and professionals. The results of this study may lead to improved performance and enhanced innovation capabilities by mitigating the impact of disturbance in the external environment, be it market or technological turbulence. Therefore, organizations comprising tourism sector, can benefit from the findings of this study to comprehend the possible impact of environmental factors on their customer relationship management efforts, business performance and uplifting of innovation performance as well.

For academia, this research is significant as it may become the basis for inclusion of other environmental factors (political stability, social and demographic influence etc.) to further expand this model. Additional environmental influencers may lead to more clarity and broad based generalization of this model. Moreover, this relationship and model can be used as a basis to study the moderating impact of environmental turbulence in other service based industries such banking, and telecom etc. for industrial and cross-industrial comparative analysis.

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