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THE MODERATING EFFECT OF EXTERNAL ENVIRONMENT TURBULENCE IN TOURISM SECTOR

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Abstract

Tourism sector in Pakistan is facing a situation of severe crisis, plagued by poor management, lack of infrastructure, weak and ineffective policy and implementation. The looming cloud of terrorism has further diminished the role the sector could play in the country and the region's development. Recent military operations against terrorist elements and the inauguration of China Pakistan Economic Corridor (CPEC) are being hailed as a new phase, bringing more opportunities for business. However, it may also bring new challenges to the existing industry as well. The Thailand tourism industry faced similar kind of situation, but it sailed out. The current research paper examined the moderating effect of external environmental factors and relationship of Customer Relationship Management Effectiveness (CRM'e) with business performance and business innovation. A sample of 382 respondents was selected. The respondents belonged to Tourism sector in Pakistan and Thailand. The responses were tested and analysed using Structural Equation Modelling in AMOS. From the analysis it was found that Technological Turbulence, Market Turbulence and Competitive Intensity significantly moderate relationship of CRM'e with innovation and organizational performance. This study is significant as it highlights the importance of external environmental factors for business performance and innovation Vis a Vis the effectiveness of an organization's CRM capability. Results of this study hold significant implications for policy makers and stake holders

Keywords: CRM Effectiveness, Innovation, Performance, Market and Technological Turbulence, Competitive Intensity.

1. Introduction

Organizations, especially of the services industry are experiencing more challenging environment which is rapidly evolving making product life cycle shorter, hastily changing technology and demands from the customers more complex and diverse (Shepherd & Ahmed, 2000). The travel and tourism industry has witnessed a consistent and regular surge in tourists due to ever expanding middle class in both developed and developing countries, their capacity and willingness to spend for domestic and international tourism (Economic Impact Pakistan. 2014). One of the main characteristics of tourism and hospitality sector is their competitive environment where technology is shaping the way in a more dynamic way. Systems, technology and practices of the organizations working in this sector are becoming more complex, vibrant and complex.

2. Problem Statement

Developing and then maintain lasting good relations with the customers/clients are very vital and imperative for the success of any business as customers are the and should be the main focus for businesses. As these relations are very sensitive, therefore, they may affect and usually get affected by the environmental forces. Hence, organizations adapt to the changes happening in the market to satisfy, meet and to retain their customer base (Jones, 1995). It leads to foundation that, adapting to the changes in the external environment to maintain good relations with customers or clients, organizations learn a many new things, practices, adapt new technology and make itself more resilient. Resilience is defined in multiple fields and areas of study such as individual and organizational psychology (Barnett & Pratt, 2000) and strategic management (Hamel & Valikangas, 2003). The concept despite varying contexts remains constant across the board referring to the capacity of an individual and organizational systems to respond to turbulent and disrupting changes and still maintain (or return to) a previously held position of stability. Resilience is based on both weaknesses within an organizational system and its inherent ability and capacity to adjust and adapt to complex environmental changes that may have an impact in the form of reduced performance (Dalziell & McManus, 2004). This adaptive capacity allows an organization to utilize existing resources of an organization to successfully see through any disrupting influence within the system (Staber & Sydow, 2002).

For organizations to maintain stability in growth, continuous learning and adapting to the changes happening in the environment, is very significant (Kamal & Abbas, 2011). Learning from its environmental forces and stakeholders create organizational resilience that directly or indirectly influence/impact relationship and an organization with its customers/clients (Abbas & Hassan, 2016)

The theoretical basis for the model developed for the study is based on systems theory, contingency theory and stakeholder's theory. The reason is these theories discuss about the external environment factors that an organization may face, influence of the stakeholders and the fact that organization cannot operate indifference to its external environment.

3. Research Questions

- Environmental factors strongly moderate the relation between CRM effectiveness, Innovation & Business performance in Tourism sector of Pakistan
- Environmental factors strongly moderate the relation between CRM effectiveness, Innovation & Business performance in Tourism sector of Thailand

4. Purpose of the Study

The intuition behind this study was to observe the moderation impact of Market turbulence, technological turbulence and competitive intensity on the relationship between CRM'e, innovation and organizational performance.

5. Research Methods

5.1. Sample Frame/ Selection

Table 01. Reliability Analysis Statistics (Pakistan & Thailand)

Name of Variable	Dimensions	CFI'		Loadings		Cronbach Alpha		Composite' Reliability		AVE	
		Pak	Thai	Pak	Thai	Pak	Thai	Pak	Thai	Pak	Thai
CRMe'	IT Performance			0.74	0.69						
	Relationship Marketing Performance			0.65	0.71						
	Organizational Climate	0.93	0.89	0.74	0.83	0.71	0.76	0.81	0.85	0.75	0.71
Innovation	Product/Service Innovation			0.61	0.73						
	System Innovation			0.56	0.63						
	Process Innovation	0.96	0.94	0.96	0.69	0.79	0.77	0.79	0.83	0.69	0.73
Business Performance	Return on Assets			0.74	0.63						
	Competitive Advantage			0.62	0.71						
	Return on Investment	0.94	0.95	0.89	0.73	0.78	0.79	0.91	0.86	0.72	0.79
Technological Turbulence	Rate of Change of Technology			0.64	0.76						
	Technological Novelty			0.71	0.65						
	Adaption Rate	0.91	0.71	0.83	0.74	0.72	0.75	0.88	0.71	0.65	0.66
Market Turbulence	Customer Preference			0.63	0.76						
	Customers Composition			0.76	0.62						
	Regulatory Agencies	0.95	0.81	0.69	0.64	0.79	0.73	0.90	0.85	0.72	0.74
Competitive Intensity	Level of Competition			0.74	0.65						
	Industry Conditions			0.67	0.73						
	Competitive Density	0.92	0.94	0.83	0.88	0.76	0.71	0.85	0.91	0.68	0.72

The population frame for this study comprised of inter-related operational areas of tourism sector of Pakistan. The population was comprised of employees of travel agencies, hotel chains, and Tourism Ministry of Pakistan & Thailand. A list of 536 travel agencies arranging tours for Pakistan & Thailand was taken from (http://www.agents.com.pk/travelagents.aspx).

The study was purely quantitative and primary data were collected for analysis through structural modelling technique. The sample size was selected using formula presented in the paper of (Israel, 1992), $N=Z^2pq/e$ because desired population was large and the variability was also not known; therefore, assuming p=0.5 that is maximum variability. Additionally, a 95% confidence level and ±5% precision was also desired, then resulting sample size was 385 respondents. Therefore, 390 responses were collected out of which a sample of three hundred and eighty-two (382) responses was taken, as eight responses were discarded. The data were collected from Pakistan & Thailand, and compared in order to get the comparative analysis to draw concrete conclusion. The instrument was adopted from different studies such as (Kohli & Jaworski, 1990; Calantone et al., 2002; Sommers, 2009 and Shepherd & Ahmed, 2000). The adopted questionnaire was based on Liker Scale (Strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5)

5.2. Comparative Fit Index & Factor analysis

Comparative Fit Index (CFI) measures the model fitness compared to other models. Its value greater than 0.91 means significant data uni-dimentionality (Hatcher, 1994). Similarly, Cronbach Alpha measures the internal consistency to examine the proximity of related set of items to the group (Hu & Bentler, 1998). Cronbach's alpha values of variables are more than the recommended value of 0.70 (Hair, Black, Babin, Anderson, & Tatham, 2010). This shows a significant internal-consistency and reliability of the dimensions. On the other hand, composite reliability measures the degree to which a set of latent constructs indicators contribute in their measurement of a construct. The average variance extracted denotes the extent of common variance amongst the latent construct indicators (Hair et al., 2010). The values for Composite Reliability between 0.73 to .90 and observed values for Average Variance Extracted (AVE) for all cases exceeded the threshold value of 0.5, that shows reliability, consistency and validity of the data.

Table 2. Model Fitness Statistics

Fitness Index	Rule of Thumb (Hu and Bentler, 1999)	Observed values
AGFI	≥0.80	>0.901
GFI	≥0.95	>0.976
Chi-square/ degrees of freedom	≤3.00	< 2.324
CFI	≥0.90 or ≥0.95	>0.968
RMSEA	≤0.05 or ≤0.08	<0.0381
NNFI	≥0.90	> 0.969

5.3. Assessment of data normality

The rule of thumb or threshold value for normality of the data ranges between -2 to +2, Kurtosis (George & Mallery, 2005).

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Table 03. Assessment of Normality (Pakistan)

Name of Variable	Minimum	Maximum	Skewness	C.r.	Kurtosis	C.r.
CRME	1.571	5	-0.58	-1.631	0.993	1.961
BP	1	5	-0.704	-1.618	2.075	1.277
INN	1.6	5	-0.51	-1.067	1.919	1.656
Multivariate					2.144	1.12

Table 04. Assessment of Normality (Thailand)

Name of Variable	Minimum	Maximum	Skewness	C.r.	Kurtosis	C.r.
CRME	1.654	5	-0.67	-1.541	1.739	1.827
BP	1.434	5	-0.61	-1.681	1.875	1.357
INN	1.537	5	-0.63	-1.518	1.833	1.687
Multivariate					1.244	1.325

5.4. Multicollinearity Statistics

High correlation among the latent variables (multicollinearity) can badly affect estimated coefficients in a multiple regression analysis (Paetzold, 1992). To test the existence of this problem Multicollinearity test was carried out.

Coefficients[a]

Table 05. *Multicollinearity Statistics (Dependent variable Innovation)*

Model	Collinearity Statistics			
	Tolerance (Pak & Thai)		VIF (Pak & Thai)	
CRM'e	.619	.537	1.61	1.51

Coefficients[b]

Table 06: *Multicollinearity Statistics (Dependent variable Performance)*

Model	Collinearity Statistics			
	Tolerance (Pak & Thai)		VIF (Pak & Thai)	
CRM'e	.632	.549	1.43	1.58

5.5. Correlation Statistics

To check the nature of linear relationship among the variables, correlation statistics is used. It determines the direction and measure of the strength of a linear association between two variables (Bolboaca & Jäntschi, 2006).

Table 07. Correlations Statistics (Pakistan)

Variable	CRM'e	Innovation	Performance	Market Turbulence	Competitive Intensity	Technological Turbulence
CRM'e	1					
Innovation	0.530[**]	1				
Performance	0.546[**]	0.731[**]	1			

Market Turbulence	0.437**	0.513**	0.738**	1		
Competitive Intensity	0.447	0.668	0.487	0.508	1	
Technological Turbulence	0.551**	0.484*	0.539**	0.566**	0.508*	1

Table 08. Correlations Statistics (Thailand)

Variable	CRM'e	Innovation	Performance	Market Turbulence	Competitive Intensity	Technological Turbulence
CRM'e	1					
Innovation	0.610**	1				
Performance	0.646**	0.610**	1			
Market Turbulence	0.517**	0.613**	0.491**	1		
Competitive Intensity	0.547**	0.658**	0.667**	0.598**	1	
Technological Turbulence	0.641**	0.544*	0.569**	0.666**	0.628*	1

Note: **Correlation is significant at the .01 level (2-tailed). N=191

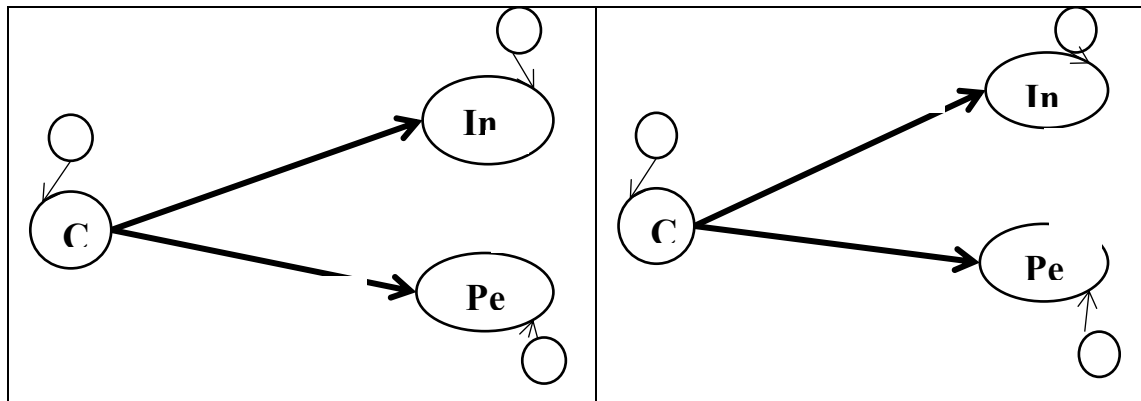**Figure 01.** Standardized Regression Coefficients (Pakistan)

Figure 02. Standardized Regression Coefficients (Thailand)

Table 09. Standardized Regression Coefficients (Pakistan)

Parameters			Path Coefficients	Probability
CRMe	$\longrightarrow$	Innovation	$\beta = .28$	***
CRMe	$\longrightarrow$	Performance	$\beta = .55$	***

Notes: *** p-value < 0.001; ** p-value < 0.05; * p-value < 0.10

Table 10. Standardized Regression Coefficients (Thailand)

	Parameters		Path Coefficients	Probability
CRMe	⟶	Innovation	$\beta = .41$	***
CRMe	⟶	Performance	$\beta = .67$	***

Notes: *** p-value < 0.001; ** p-value < 0.05; * p-value < 0.10

5.6. Moderation Analysis

The model developed for this study was tested through Structural Equation Modelling through AMOS (Hair et al., 2010). The sample was divided into two sub-samples along the median of each of the moderating variable. To observe the impact of the moderating variable, Chi-Square difference was applied between the constrained and un-constrained models. The baseline or the un-contrained model is the one that allows path co-efficient to vary across the two sub-samples (Zweig, & Webster, 2003). Further, the model that restrict the estimates/co-effcients to remain same across the two sub-samples is called constrained model (Ahmad, Ramayah, Wilson, & Kummerow, 2010). The results from the analysis were satisfactory. For the nested model, values of Chi-Square are always higher for the constrained model compared to the un-constrained model. Increase in the values of Chi-Square shows moderating effect (Kemper, Schilke, & Brettel, 2013).

Table 11. (Pakistan): Results of Moderation Analysis

Hypothesis	Relationship	Moderator Variables	Low Value of Moderator (Standardized Co-efficient)	High Value of Moderator (Standardized Co-efficient)	X^2 Difference (Δd.f = 1)
H1a	CRM'e→ Innovation		$\beta_1 = 0.255$	$\beta_2 = 0.488$	$X^2_{diff} = 84.8$ ***
H1b	CRM'e→ Performance	Technological Turbulence	$\beta_1 = 0.383$	$\beta_2 = 0.493$	$X^2_{diff} = 71.8$ ***
H2a	CRM'e→ Innovation		$\beta_1 = 0.344$	$\beta_2 = 0.287$	$X^2_{diff} = 64.1$ ***
H2b	CRM'e→ Performance	Market Turbulence	$\beta_1 = 0.317$	$\beta_2 = 0.299$	$X^2_{diff} = 51.6$ ***
H3a	CRM'e→ Innovation		$\beta_1 = 0.187$	$\beta_2 = 0.233$	$X^2_{diff} = 83.7$ ***
H3b	CRM'e→ Performance	Competitive Intensity	$\beta_1 = 0.331$	$\beta_2 = 0.415$	$X^2_{diff} = 89.6$ ***

Table 12. (Thailand). Results of Moderation Analysis

Hypothesis	Relationship	Moderator Variables	Low Value of Moderator (Standardized Co-efficient)	High Value of Moderator (Standardized Co-efficient)	X^2 Difference ($\Delta d.f = 1$)
H1a	CRM'e→ Innovation		$\beta_1 = 0.315$	$\beta_2 = 0.437$	$X^2_{diff} = 79.5$ ***
H1b	CRM'e→ Performance	Technological Turbulence	$\beta_1 = 0.471$	$\beta_2 = 0.503$	$X^2_{diff} = 78.4$ ***
H2a	CRM'e→ Innovation		$\beta_1 = 0.493$	$\beta_2 = 0.391$	$X^2_{diff} = 69.8$ ***
H2b	CRM'e→ Performance	Market Turbulence	$\beta_1 = 0.381$	$\beta_2 = 0.299$	$X^2_{diff} = 61.3$ ***
H3a	CRM'e → Innovation		$\beta_1 = 0.356$	$\beta_2 = 0.473$	$X^2_{diff} = 71.6$ ***
H3b	CRM'e→ Performance	Competitive Intensity	$\beta_1 = 0.381$	$\beta_2 = 0.431$	$X^2_{diff} = 79.1$ ***

Note: *** p-value < 0.001; ** p-value < 0.05; * p-value < 0.10

6. Findings

6.1. Moderation Analysis Results Discussion & Findings

The moderating analysis was conducted on Market, Technological Turbulence and competitive intensity. These environmental varibales have also been discussed in the literature in different context. In the study of Kemper, Schilke, & Brettel, (2013), technological and competitive intensity were analysed as the moderating variable in the framework of organizational performance and social capital. Likewise, competitive intensity and environmental turbulence variables have also been analyzed in the context of performance and business innovation as moderating variables (Hung & Chaou 2013; Garcia-Zamora & Gonzalez-Benito, 2013; Su Shen & Xia 2013; Bodlaj, Coenders, & Zabkar, 2012). In the current study the aforementioned variables were analysed as moderating to test the relationship between CRM'e, business performance and innovation.

The results of the moderation analysis indicated that the in a market situation characterised as highly technological turbulent, the relationship between CRM's business performance and innovation tend to be stronger. The results shown in the above-mentioned table reveal that relationship between CRM'e and innovation is significantly moderated by the technological turbulence as $\beta_1 = 0.255$ is lower than $\beta_2 = 0.488$.

In the same way, the relationship between CRM'e and business performance is significantly moderated by the Technological turbulence as $\beta_1 = 0.383$ is lower than $\beta_2 = 0.493$. in the light of above results, the hypotheses, H1a and H1b are accepted that means business environment characterized by rapid change in technology, always influence innovation and improves business performance of the organizations related to tourism sector as a result of enhanced CRM'e.

Similarly, in markets which are weaker or less turbulent, the relationship between CRM's business performance and innovation, tend to be weaker. On the basis of results shown in the table above, H2a and Hb2 are rejected as standardized co-efficient values of market with low turbulence (H_{2a}-$\beta_1 = 0.344$ and H_{2b}-$\beta_2 = 0.317$) are higher than values of market with high turbulence (H_{2a}-$\beta_2 = 0.287$ and H_{2b}-$\beta_2 = 0.299$). based on these results it can be said that organizations working in tourism sector can innovate and perform better where, preference of the customers, their needs and government regulations do not change rapidly.

Based on the results in the table above, H3a and H3b are also accepted that means that organizational performance and innovation tend to be higher/stronger in markets with high level of competition (H3a-β_{2} = 0.233 and H3b-β_{2} = 0.415) as compared to that market where competitive intensity is low (H$_{3a}$-β_1 = 0.187 and H$_{3b}$-β_1 = 0.331). Hence it can be said that firms will innovate and perform well because of CRMe, in those market condition where competitive intensity is higher.

In case of moderating results for Thailand, technological turbulence and competitive intensity have positive and significant moderating impact on the relation between CRM effectiveness and business innovation and business performance except for market turbulence.

7. Conclusion

This study is an effort to extend these theories i.e. contingency theory, systems theory and stakeholder theory, in tourism sector of Pakistan, through extending their linkages with each other and their integrated impact on organizational performance and innovation. In the light of results and literature, tourism sector needs to promote resilience strategy and measures within organizations for sustainability and growth considering the political and security related issues that plague the state. On part of government and other policy formation corridors shall provide a stable environment in context of prevailing security situation to let businesses establish and flourish themselves. Similarly, the tourism sector must also build measures of self-sustainability and protection within itself. To cope and survive the challenges of CPEC and vision 2020, this important sector needs to continuous learn from external environment and align itself with the outside changes. Especially the SME's working in tourism sector need to give more attention to their competitive advantage hence ensuring better performance (Shah, El-Gohary, & Hussain, 2015). Moreover, strategy and policy makers in Pakistan can take help from the outcomes of this research and try to strategically manure the policies regarding country's important sector i.e. Tourism, to cope the challenges of future.

Acknowledgments

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