

**The Impact of Market Orientation, Top Management Support, Use of E-Marketing and Technological Opportunism on the Firm Performance: A Mediated-Moderation and Moderated-Mediation Analysis**

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**Abstract**

Understanding the effective use of technological innovation's, for instance e-Marketing, is debatably considered as the vital challenge faced by the businesses. The past studies indicated that the association among organizational factors and firm performance is mediated by the influence of the adopted innovation like e-Marketing uses. Though, the antecedents of e-Marketing to enhance firm performance have received little attention. Drawing on the Resource Based View and diffusion of innovation theory, this article has empirically examined the effect of Market Orientation (MO), top management support (TMS), Technological Opportunism (TOP) and mediating effect of use of e-Marketing (UEM) on textile performance by using SmartPLS 3.0 with a sample size of 278 textile firms in Pakistan. A moderated mediation analysis revealed that the relationship between MO and UEM is moderated by top management support and the mediated moderation analysis revealed that technological opportunism moderates the relationship between use of e-Marketing and performance of textile firms. The direct hypothesis also found significant showing the positive relationships. Implications for theory and practice are discussed regarding bundling of IV and moderators in order to increase both UEM and firm performance.

Keywords: Use of e-Marketing, Market Orientation, Top Management Support, Technological Opportunism, Firm Performance, Textile Firms

Nowadays, Performance by industrial sector has gained considerable attention from many academicians and practitioners (Arifin & Frmanzah, 2015). Therefore, a great deal of interest has raised in the field of innovation that has significantly supported the business operations and helped the firms to enhance their global reach. However, the recent revolution in e-Marketing has considerably affected the performance of the business (Eid & El-Gohary, 2013; El Gohary, 2012). In line with the statement, today, a growing number of organizations are using the internet or other electronic tools to communicate with their trading partners, government institutes, customers and also with end-

users of their products and services (Ahmad, Rahim, Bakar, & Mohamed, 2014; El-Gohary, 2010, 2012; Mosawi et al., 2016).

Recently, it is widely accepted that technological change and innovation are fundamental sources of productivity and sustainable growth for a business (Arifin & Frmanzah, 2015; Johnson, Scholes, & Fréry, 2002; Markides, 1997). Furthermore, use of technology is a form of strategic innovation that is basically a different way of competing with competitors and also improving the financial of existing businesses (Ireland & Webb, 2007; Riddell & Song, 2012), therefore, the successful adoption of technology in the firms is that which is significantly “affecting their competitive advantages” to achieve the firm’s performance (Arifin & Frmanzah, 2015; Barney, 1991; Das, Majumdar, Chakrabarti, & Chakrabarti, 2013).

In the outlook of Economic Survey Of Pakistan (2015) explains that, Pakistan, is one of the developing country of South Asia with a population of more than 190 million with major industrial production based on agriculture. But still, the performance of textile sector in Pakistan has considered to be one of the major issues in the progress of Pakistan economy and its concerns for all the customers, shareholders, suppliers, policy makers and the industrialist of Pakistan which are getting affected by the slugging performance of this sector from last decade. While, as compared to other regional competitors like China, India and Bangladesh, Pakistan textile performance is on the lowest side, even in the global market share, Pakistan textile share is less than 1%, which is an alarming situation and questionable on the future of textile industry in Pakistan (Abrar et al., 2008; Adnan, 2014; Ahmed, 2012).

The use of technology has been studied mainly with the help of several theories like “technology acceptance model (TAM)” (Davis, Bagozzi, & Warshaw, 1989; Davis, 1986, 1989) “theory of planned behavior (TPB)” (Ajzen, 1985; Ajzen, 1991) “unified theory of acceptance and use of technology (UTAUT)” Venkatesh, Morris, Davis and Davis (2003) and many other theories related to individual behavior but limited studies has seen its effect on firm level and to see the impact of firm performance with the help of TOE framework, DOI and RBV theory. However, this study extends previous literatures of technology usage in emerging countries, particularly in the textile industry and shows the relevance of their theories and empirical findings. The Resource Based View theory (RBV) and the TOE framework consistent with Diffusion of Innovation theory will be used to identify the variables that might influence the adoption of e-Marketing by textile industry alongside previous studies and theories within the field.

Moreover, innovation diffusion is an antecedent that likely increases performance as it implies IT integration. So, technology opportunism capability enhances IT diffusion strategy, which, in turn, impact on firm performance and also technological opportunism directly affect the firm performance (Voola, Casimir, Carlson, & Anushree

Agnihotri, 2012). Also the literature explaining the relationship of technological opportunism with firm performance has been found in the following studies (Sarkees, 2011; Srinivasan, Lilien, & Rangaswamy, 2002) as well as these studies also explained the relationship of technological opportunism with e-business, but the moderating role of technological opportunism in relationship between use of e-Marketing and firm performance is unknown and not yet been explained by any of the past studies. Therefore the current research is tended to analyze the moderating effect of technological opportunism between use of e-Marketing and performance of textile sector in Pakistan (Sheikh, Shahzad, & Ku Ishak, 2017; Sheikh, Shahzad, & Ishak, 2016a, 2016b).

Besides, a study by Ahmad, Rahim, Bakar and Mohamed (2014) clarifies about those companies who have positive management attitude towards adoption of e-Marketing would have more inclination to start e-commerce activities because when top managers in any company understand the significance of a particular technology like e-Marketing, they incline to play a vital role in persuading other organizational members to accept it. Therefore the study has uncluded top management support as a moderating variable between market orientation (MO) and use of e-Marketing (UEM) to strengthen the inconsistent relationship between MO and UEM. Previous studies also suggested to include top management support as a moderating variable particularly between market orientation and use of e-Marketing (Sheikh, Shahzad, & Ku Ishak, 2017; Sheikh, Shahzad, & Ishak, 2016a, 2016b).

Theoretically, the current study is expected to contribute to the current knowledge in order to enhance the performance of textile sector with the help of underpinning and supporting theory. Thus, its explicit contribution is the conceptual explanation of the indirect effects of e-Marketing uses at firm level that can be a key predictor of firm performance in e-business or e-Marketing environment. In conclusion, this study will enrich the literature by examining the relationship between use of e-Marketing and firm's performance in dynamic process and also in a rapid changing environment with the help of several independent variables. Other than that, the practical contribution is concerned the conclusions of the this research probably facilitates industrialist, policy maker, head of department, marketing manager's, and particularly the management of textile sector to grow efficiently to get improved performance.

### **Research Questions and Objectives**

1. Does market orientation, top management support influence use of e-Marketing and textile sector performance in Pakistan?
2. Does use of e-Marketing mediates the relationship between market orientation, top management support and textile sector performance in Pakistan?

3. Does top management support moderates the relationship between market orientation and use of e-Marketing?
4. Does technological opportunism moderates the relationship between use of e-Marketing and textile performance in Pakistan?

The derived questions has been examined further and consider as an objectives for current study.

## **Literature Review**

### **Top Management Support and Firm Performance**

Several studies claimed that top management is responsible for firm beyond production management. It implies that, top management is responsible for overall decisions of the firm. The role of TM includes; management of external relationships, continuous improvement of the organization. The actions and decisions thru by the top-managements would likely to have an influence on the organizational growth, change, and expansion because those who are at the higher management would have greater impact on the decisions and these decisions are strategic in nature (Carpenter, Geletkanycz, & Sanders, 2004; Varukolu, 2007). As revealed by Rahim et al. (2015), the management support is found to be the most essential factor of innovation

However, literature has used top management support as an independent variable in the studies related to technology adoption (e.g. Related to innovation, e-business or e-commerce, e-Marketing, e-procurement, e-government) (Ahmad, Rahim, et al., 2014; Al-qirim, 2007; Arifin & Frmanzah, 2015; Rahayu & Day, 2015). But very few studies have empirically examined the impact of top management support on firm performance, so this main issue needs to be addressed in the current study. Therefore, based on the above discussed literature the recommended proposition is;

**H1:** Top management support positively influence on firm performance.

### **Market Orientation and Firm Performance**

Marketing and management science have argued that superior customer value is instrumental in achieving a sustainable competitive advantage (Rohit Deshpandé & Farley, 2004; Porter, 2008). In the field of marketing, there are numerous definitions of market orientation (Deshpandé, 1999; Jaworski & Kohli, 1993; Narver & Slater, 1990). But in this study, the definition of Narver and Slater (1990) has been highlighted, which argues that “market orientation consists of a (a) competitor orientation, which includes the activities involved in acquiring information about the competitors in the target market and transmitting it throughout the firm, (b) customer orientation, which includes the activities involved in acquiring information about the customers in the target market and disseminating it through- out the firm, and (c) inter-functional coordination, which comprises the firm’s

coordinated efforts, involving more than the marketing department, to create superior value for the customers.

Empirical studies have found sturdy evidence that, market-orientation is a crucial strategic determinant of a firm's long-term competitive position e.g., (Homburg & Pflesser, 2000; Narver & Slater, 1990), because it upsurges the customer satisfaction, new product's success, and customer loyalty. Studies found that customers mainly from the European Union and US is moving to China, India and Bangladesh on a continuous basis and Pakistan global market share have been affected badly for last few years (World Trade Organization, 2014). So it needs to address that, how the market orientation will help the firms to fill the gap between customers and firms through the help of external environment analysis and finally, to understand, what is the role of market orientation towards textile sector performance.

Past studies have used market orientation as a predictor in the studies related to firm performance. But limited studies have empirically examined the impact of market orientation on the firm performance through e-Marketing adoption (Rahim et al., 2015; Voola, Casimir, Carlson, & Agnihotri, 2012). Therefore, based on the above discussed literature the recommended proposition is;

**H2:** Market orientation positively influence on the firm performance

### **Use of e-Marketing and Firm Performance**

Studies have reported mixed findings on the impact of e-Marketing uses on firm performance. Yet, the benefits achieved were inconsistent in different sectors due to the sizes and regions (Johnston & Wright, 2004). However, in the same perspective, the realized benefits were positively associated with the use of e-Marketing (Sam & Leng, 2006). Despite all the arguments, that highlight the importance of the use of e-Marketing to increase the firm performance. The studies linked these two variables are very limited in numbers, previous studies have normally used e-business, e-commerce and innovation as a mediation with the firm performance, but use of e-Marketing is still neglected by the previous researchers to use as a mediator with firm performance.

Nevertheless, the literature focusing on e-Marketing adoption and extension has some gaps that need to be addressed. Likewise, several past studies have claimed inconsistency in the relationship between the use of e-Marketing and the firm performance. Secondly, scholars have traditionally focused on western organizations. Even though e-Marketing practices will increase the performance, especially, needed by Pakistani organizations, particularly in the textile sector of Pakistan (Sheikh, A.A., Shahzad, A., & Ku Ishak, 2017; Sheikh et al., 2016a, 2016b; Voola et al., 2012). Further, according to Iddris and Ibrahim (2015) recommended that, there is a need to establish a relationship between the use of e-Marketing factors and the firm performance.

According to Eid and El-Gohary (2013) found that, there is a positive association among e-Marketing and the marketing activities. A successful use of e-Marketing is one of the leading problem to succeed in achieving the business objectives. These objectives can be a new way to increase the sales, creating new customers, new digital markets, and reduction in the physical, operational-cost, increased-profit, increased market-shares, increased brand-equity that is set by the organization. Furthermore, Eid and El-Gohary (2013) indicates that, assigning an adequate budget for the electronic marketing implementation will allow companies to interact, communicate and respond more efficiently with customers both locally and globally.

The literature revealed that, the association between antecedents and firm performance is mediated by the effect of the accepted innovations (for instance e-Marketing). However, further illuminated that, there is a positive effect of innovation on firm performance specifically in manufacturing industries. Managers working in different firms must put additional effort on innovations because it will ultimately help in achieving the sustainable growth. However, good and innovative performance is depending upon the severity of implementing the innovative technology (Ahmad et al., 2014). Therefore, from the supported previous literature, it can conclude that the use of e-Marketing is one of the strongest and imperative predictor of firm performance. Thus, based on the above literature, below hypothesis has been articulated;

**H3:** Use of e-Marketing positively associated with firm performance.

### **Use of e-Marketing relationship with Top Management Support, Market Orientation and Firm Performance (Mediation)**

According to Liang et al. (2010), there is a weak relationship between organizational factors and firm performance, however, findings also imply that, more studies are required in the future to examine why this relationship is weak and whether there are better ways through which it can divulge more depth into the character of organization resources in order to increase the firm performance. However, this study has been conducted in the context of Pakistan textile sector to understand the role of top management support and market orientation in relationship with firm performance through mediating role of e-Marketing adoption.

Furthermore, recent studies have stressed the unique role of management commitment and perceptions of ICT benefits, which influence the management to adopt the desired technology. While, management support reinforces firm's technology motivation to adopt e-Marketing technology in order to observe long term firm performance and competitive edge (Beekhuizen, Hellens, & Siedle, 2005; Mombourquette, 2008). On the other side, a study by Ahmad et al. (2014) indicated that, top management's plays a vital role to adopt IT as

it is one of the factors, that contribute toward use of e-commerce. It can be expected that, companies that have positive management attitude toward e-commerce have more tendency to initiate e-commerce activities in order to accelerate business performance more effectively.

Competitive advantage is aided by the ambiguous nature of the multiple relationships between market orientation, e-Marketing use and firm performance. The marketing literature has demonstrated the importance of mediators such as innovation with respect to the capability-performance relationship (Foley & Fahy, 2009). Innovation has been argued by Wu et al. (2003) to mediate the effects of customer orientation on performance. In line with previous discussions, it is mentioned that, the capabilities such as market orientation create and shape of the firm's e-Marketing usage strategy, which will enhance the firm performance in terms of more revenue.

The study by Rapp, Schillewaert and Hao (2008) also suggests that efforts towards, how the different corporate factors impacting a firm's-orientation to the market as well as its customers in order to gain a deeper understanding about the overall market orientation → innovation → performance framework. Finally, it might be important to look at more particular outcomes of performance and also organization effectiveness. For instance, an examination of the effects of market orientation and innovation on organizational commitment and satisfaction should prove a worthwhile effort. Therefore, based on the above discussed literature the recommended propositions are;

**H4:** e-Marketing uses mediates the relation between top management support and firm performance.

**H5:** top management support has a positive link with use of e-Marketing.

**H6:** e-Marketing uses mediates the relation between market orientation and firm performance.

**H7:** Market orientation has a positive link with use of e-Marketing.

### **Top Management Support (TMS) as a Moderating Variable**

In current study the top management support is selected as a moderating variable between market orientation and use of e-Marketing. Past studies have identified that top management support plays a vital role in the decision making of technology diffusion and found as a strong predictor and performs a multiple role in the significance of the relationship. Based on the previous research, this study has included TMS as a moderating variable between market orientation and use of e-Marketing.

A study by Haugh and Robson (2005) found that those firms, in which top management commitment is more towards adoption process are likely to adopt information technology more rapidly. Whereas, management support has a strong influence on the implementation of infusion and diffusion systems of intranet in the firms. Therefore, a researcher claims that management support motivates to adopt e-

Marketing technology by giving strength to the firm's technology to become more efficient in internal processes as well as in external communication to reduce customer and trading partner's communication gap and to increase its credibility in the market.

Next, several studies have indicated that structure of the organizations are becoming more complex and with such density the focus has shifted to include more factors that directly impact on the use of technology. The top management factors are vital for the success of information systems within organizations because top management support is found as a significant moderator of e-Marketing adoption (Ahmad, Rahim, et al., 2014; Al-qirim, 2007; Arifin & Frmanzah, 2015; Rahayu & Day, 2015). However, the findings will contribute to the existing literature to see the role of top management support as a moderator in a relationship between market orientation and use of e-Marketing. Hence, based on the literature, the following hypothesis has been developed:

**H8:** Top management support moderates the relationship between market orientation and use of e-Marketing.

### **Technological Opportunism (Moderator)**

Innovation diffusion is an antecedent that likely increases performance as it implies IT integration. So, technology opportunism capability enhances IT diffusion strategy, which, in turn, impact on firm performance and also technology opportunism directly affects the firm performance (Voola et al., 2012). Also the literature explaining the relationship of technological opportunism with firm performance (Sarkees, 2011; Srinivasan, Lilien, & Rangaswamy, 2002), these studies also explained the relationship of technological opportunism with e-business, but the moderating role of technological opportunism in relationship between use of e-Marketing and firm performance is unknown and not yet been explained by any of the past studies. Therefore the current research is tending to analyze the moderating effect of technological opportunism as it remained significant predictor and also a moderator with other DV's and mediating variables. So researcher has selected this variable to confirm its applicability in current research to strengthen the inconsistent relationship between use of e-Marketing and firm performance.

**H9:** Technological opportunism moderates the relationship between use of e-Marketing and firm performance

**H10:** Technological opportunism has a positive significant relationship with firm performance

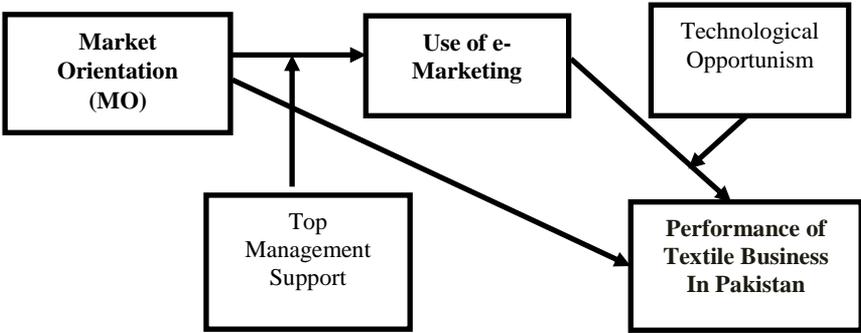


Figure 1. Conceptual Framework

### Research Methodology

The respondents for this study were marketing managers working in textile firms in Pakistan. The study included only two major provinces of Pakistan for data collection purposes, which are Punjab and Sindh province. The study has selected these two provinces because these provinces consist of major cities of Pakistan like Lahore, Bahawalpur, Rahimyar Khan, Multan, D.G Khan, Karachi, Sukkur, Hyderabad etc. According to APTMA and APBUMA, there are major textile hubs with approximately 955 textile firms. The rest of the two provinces which are Balochistan and Khyber Pakhtunkha have very few textile firms which have been neglected in this study due to research cost and generalizability issues. However, 278 cases or sample size has been selected in this study according to the Morgan table and also recommended by Hair et al. (2014) about the rule of thumb that the sample size must be 10-20 times larger than the total number of variables of the study.

### Determination of the Sample Size

The sample size of the current study was based on the morgan table, which suggest that, sample size of 278 or above is sufficient for the population between 950-1000 (Morgan, 1960). Therefore, the researcher has collected the sample of marketing managers from the textile firms located in Punjab and Sindh province of Pakistan. The sampling technique employed for current study is a cluster proportionate random sampling also known as area sampling. According to the cluster sampling, the population of textile firms of Pakistan is divided into four provinces, therefore, two provinces has been selected based on the importance of these provinces, after that major city has been highlighted based on the list provided by APTMA and APBUMA regarding number of textile firms in these cities and after finalizing the list proportionate technique has been used to properly segregate the sample to generalize the findings.

## Research Measures

The variables and items of current research have been adapted from the past studies after doing pilot and pre-test to validate the instrument for current study perspective. Though, the research questionnaire is divided into two major sections. The first section contains seven Likert-type scale items and the second section intended to get the demographic data of the respondents. The Likert scale is intended to notice the degree of response about how sturdily the respondents get agree and disagree with a specific question (Sekaran, 2006). Additionally, the aim to select 7-point Likert scale is to provide additional choices to the respondents to internment of better capriciousness of respondents attitude and behavior (Hinkin, 1995).

Therefore, several items have been selected, likewise, 12-item scale to measure market orientation has been adapted as given by (Narver & Slater, 1990). Also, 4-item scale to measure top management support has been adapted from (Premkumar, Ramamurthy, & Nilakanta, 1994). Additional, 8-item scale to measure use of e-Marketing has been adapted from (Srinivasan, Lilien, & Rangaswamy, 2002). Besides, 8-item of technological opportunism has been adapted from (Srinivasan, Lilien, & Rangaswamy, 2002). Lastly, 7-item scale to measure firm performance has been adapted from (Hooley et al., 2005).

Table 1. *Variables, No. of Items, Sources*

Variables of the study	Number of items
Market Orientation	1. Our organization rapidly respond to competitive actions that threaten us.
	2. Our salespeople regularly share information concerning competitors' strategies.
	3. Top management regularly discusses competitors' strengths and strategies.
	4. Our company business objectives are driven primarily by customer satisfaction.
	5. Our company strategy for competitive advantage is based on understanding of customer needs.
	6. Our company strategies are driven by beliefs about how we can create greater value for customers.
	7. Our organization measure customer satisfaction systematically and frequently.
	8. All of our business functions are integrated in serving the needs of our target markets.
	9. All of our business functions are responsive to each other's needs and requests.
	10. Our company top managers from every function regularly visit current and prospective customers
	11. Our company communicate information about customer experiences across all business functions
	12. Our company managers understand how we can contribute

	to creating customer value.
Top Management Support	<ol style="list-style-type: none"><li>1. The owner of our company enthusiastically supports the adoption of new technologies</li><li>2. The owner or manager has allocated adequate resources to adoption of these new technologies</li><li>3. Top management is aware of the benefits of these new technologies</li><li>4. Top management actively encourages employees to use the new technologies in their daily tasks</li></ol>
Use of e-Marketing	<ol style="list-style-type: none"><li>1. Our organization use e-Marketing resources (such as web site and e-mail) to communicate with customers.</li><li>2. Our organization use e-Marketing resources to support firm's traditional commercial activities (e.g. pricing information, customer service).</li><li>3. Our organization use e-Marketing resources to conduct commercial transactions (e.g. selling products and accepting payment via web site).</li><li>4. Our organization have a computerized customer database that use to perform marketing activities (e.g. inform customers about new products).</li><li>5. Our organization have implemented e-Marketing in all business processes</li><li>6. Our organization e-business plans are integrated into overall business plan</li><li>7. Our organization has freed up the necessary funds for our e-business initiatives</li><li>8. Our organization possess the adequate technological infrastructure and competencies to implement e-business as well</li></ol>
Technological opportunism	<ol style="list-style-type: none"><li>1. Our organization is often one of the first in our industry to detect technological developments that may potentially affect our business.</li><li>2. Our organization actively seek intelligence on technological changes in the environment that are likely to affect business.</li><li>3. Our organization generally respond very quickly to technological changes in the environment.</li><li>4. Our organization periodically review the likely effect of changes in technology on our business.</li><li>5. Our organization is often slow to detect changes in technologies that might affect our business.</li><li>6. This business lags behind the industry in responding to new technologies.</li><li>7. For one reason or another, Our organization is slow to respond to new technologies.</li><li>8. Our organization tend to resist new technologies that cause current investments to lose value.</li></ol>
Firm Performance	<ol style="list-style-type: none"><li>1. Our organization Sales volume achieved compared to competitors.</li><li>2. Our organization market share compared to competitors.</li></ol> Financial performance

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3. Our organization overall profit levels achieved compared to competitors.
  4. Our organization profit margins compared to competitors.
  5. Our organization return on investment compared to competitors.
  - Customer loyalty performance
  6. Our organization levels of customer loyalty compared to competitors.
  7. Our organization levels of customer satisfaction compared to last year.
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## **Data Collection**

Cross sectional data through self administered questionnaires was employed, to find the impact of market orientation, top management support, use of e-Marketing and technological opportunism on the performance of textile business in Pakistan. The number of the textile firms in Punjab and Sindh provinces is 955. Moreover, 278/cases or sample size for this study based on Morgan method presented in 1960 and the rule of thumb by Hair et al. (2014) has been selected.

*Table 2. Response from respondents*

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Response	Frequency/Rate
No of Questionnaires	481
Questionnaires Received Back	297
Returned & Use-able Questionnaires	278
Excluded Questionnaires	19
Questionnaires not received from respondents	184
Total Response Rate	61.7%
Valid Response after data entry	57.8%

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Hence, table 3.1 shows that only 278 questionnaires were useable for subsequent analysis that gives a valid response rate of 58% and total response of 62%. The response rate was obtained comparable to other several past studies using managers of manufacturing sector for instance 68% by (Hassan, Mukhtar, Qureshi, & Sharif, 2012) in the context of Pakistan.

However, the study employed PLS-SEM technique to test the hypothesis as this is comparatively newly accepted technique because it works much better with the structural equation models, that comprises of latent variables and a succession of cause-and-effect connection (Gustafsson & Johnson, 2004). However, the PLS-SEM analysis technique is a better and flexible tool for the building of statistical model. So, to give answers about the objectives of the current study, PLS-SEM technique has been used.

### **Data Analysis and Results**

In this segment the results of confirmatory analysis for this present study by using principle component analysis method. Items of the study variables have been adapted from previous studies, while this research commenced only factor analysis by using SmartPLS 3.0 (Ringle et al., 2015) which have a built-in feature of the CFA.

PLS (SEM) technique has used to validate the measurement model and test the hypotheses through the help of algorithm and bootstrapping techniques. However, the PLS technique uses a component-based approach for estimation of model and is much suitable for testing the complex structure models. In the current study, the PLS-SEM technique is employed because it does not execute any normality requirements for the research data. This is a two step modeling, firstly, which assess the quality of the measurements by using this measurement model (outer model), and then test the hypotheses by using the structural model also called inner model (Ringle et al., 2015). This technique employs to measure the reliability and validity of the variables.

### **Measurement Model Assesment**

The research measurements, reliability were evaluated by finding the values of Cronbach’s alpha and composite reliability. Moreover, the variables are measured adequately when the Cronbach’s alpha values are more than the recommended value of 0.70 (Hair et al., 2014) and composite reliability values are more than the recommended value of 0.70 (Straub et al., 2004). However, composite reliability is measured more rigorously for reliability estimation (Chin & Gopal, 1995). As shown in Table 1, the composite reliability values surpass 0.80 and Cronbach’s alpha values surpass 0.70. Hence, the overall model may be considered as much reliable.

For examining the convergent validity, each of the item loadings on its fundamental variable must be more than 0.70 (Chin, Marcolin, & Newsted, 2003). Also, the average variance extracted (AVE) for every variable would be more than the recommended value of 0.50 (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). As witnessed in Table 1, the AVE value’s are more than the threshold value of 0.50. Also, each item factors loading is more than 0.50, as follows in Table 1. However, it proves that the convergent validity is acceptable for the measurement model.

*Table 3. Loadings, Cronbach Alpha, Composite Reliability, AVE*

Construct	Item	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Firm Performance (FP)	FP1	0.883	0.821	0.871	0.577
	FP2	0.662			
	FP3	0.694			
	FP4	0.843			

	FP7	0.690			
	MO1	0.951	0.915	0.930	0.565
	MO10	0.570			
	MO11	0.560			
	MO12	0.886			
Market Orientation (MO)	MO2	0.677			
	MO3	0.535			
	MO4	0.922			
	MO5	0.630			
	MO6	0.520			
	MO7	0.942			
	MO9	0.943			
Top Management Support (TMS)	TMS1	0.718	0.757	0.819	0.532
	TMS2	0.706			
	TMS3	0.700			
	TMS4	0.790			
Technological Opportunism (TOP)	TOP1	0.682	0.811	0.861	0.515
	TOP2	0.868			
	TOP3	0.746			
	TOP4	0.600			
	TOP5	0.834			
	TOP8	0.510			
Use of e-Marketing (UEM)	UEM1	0.815	0.890	0.916	0.649
	UEM2	0.612			
	UEM3	0.822			
	UEM4	0.882			
	UEM5	0.870			
	UEM8	0.804			

Discriminant validity was examined to identify the extent to which the measurements in the model vary from other measurements in the same model. In the context of PLS SEM, the criterion for discriminant validity for a construct is that, it may share more variance with its measurements than it share with other construct(s) in the mentioned model (Fornell & Larcker, 1981).

**Table 4. Discriminant Validity**

	FP	MO	TMS	TOP	UEM
FP	0.760				
MO	0.325	0.751			
TMS	0.512	0.229	0.730		
TOP	0.309	0.057	0.402	0.718	
UEM	0.366	0.208	0.418	0.057	0.806

The discriminant validity is investigated by examining the correlations among the measurements of possibly overlapping variables and its items. Also, as revealed in Table 4, the correlations among any of the two variables is greater than 0.70. The uppermost correlation between any two variables must have value of 0.60. As revealed in

Table 3, the square root of the AVE of each construct is larger than all the cross correlation among the variables (Fornell & Larcker, 1981). These examinations recommended that discriminant validity is acceptable.

*Table 5. Loading and Cross Loadings*

Item (s)	FP	MO	TMS	TOP	UEM
FP1	<b>0.883</b>	0.338	0.463	0.301	0.384
FP2	<b>0.662</b>	0.211	0.416	0.269	0.266
FP3	<b>0.694</b>	0.152	0.315	0.091	0.207
FP4	<b>0.843</b>	0.306	0.409	0.323	0.287
FP7	<b>0.690</b>	0.155	0.297	0.084	0.187
MO1	0.295	<b>0.951</b>	0.220	0.078	0.196
MO10	0.098	<b>0.570</b>	0.019	-0.043	0.075
MO11	0.094	<b>0.560</b>	0.065	-0.034	0.070
MO12	0.232	<b>0.886</b>	0.178	-0.031	0.216
MO2	0.296	<b>0.677</b>	0.183	0.107	0.140
MO3	0.192	<b>0.535</b>	0.144	0.062	0.155
MO4	0.345	<b>0.922</b>	0.250	0.024	0.219
MO5	0.179	<b>0.630</b>	0.084	0.049	0.022
MO6	0.155	<b>0.520</b>	0.119	0.102	0.008
MO7	0.295	<b>0.942</b>	0.224	0.047	0.210
MO9	0.302	<b>0.943</b>	0.219	0.069	0.202
TMS1	0.280	0.091	<b>0.718</b>	0.396	0.188
TMS2	0.200	0.054	<b>0.706</b>	0.369	0.139
TMS3	0.266	0.096	<b>0.700</b>	0.383	0.180
TMS4	0.331	0.280	<b>0.790</b>	0.194	0.485
TOP1	0.156	-0.021	0.382	<b>0.682</b>	0.008
TOP2	0.297	0.112	0.327	<b>0.868</b>	0.129
TOP3	0.228	0.017	0.288	<b>0.746</b>	0.049
TOP4	0.150	0.053	0.084	<b>0.600</b>	-0.067
TOP5	0.297	0.067	0.378	<b>0.834</b>	0.089
TOP8	0.098	-0.092	0.232	<b>0.510</b>	-0.149
UEM1	0.323	0.173	0.336	0.048	<b>0.815</b>
UEM2	0.165	0.023	0.256	0.053	<b>0.612</b>
UEM3	0.334	0.193	0.404	0.039	<b>0.822</b>
UEM4	0.272	0.191	0.289	0.017	<b>0.882</b>
UEM5	0.322	0.195	0.333	0.046	<b>0.870</b>
UEM8	0.309	0.181	0.373	0.074	<b>0.804</b>

### **Assessment of the Structural Model**

Next, the hypotheses generated out of this research was tested by examining the structural model using Smart PLS software. The structural model includes estimating the path coefficients, which indicates the strength of the relationships between the independent variables and dependent variable and R-square value (variance explained by the independent variables). The corresponding t-values show the level of significance using the magnitude of the standardized parameter estimates between the constructs.

In SmartPLS, structure model gave an inner model examination of the direct link among the constructs of research comprise of path coefficients and t-value's. Yet, based on the rule of thumb suggested by (Hair et al., 2014) clarifies that the bootstrapping method was performed with 5000 sampling-iterations for 278 cases to find the b-values of the co-efficient of the regressions and the t-value(s) that should be more than the threshold value of 1.64 to assess the results significance level. Although, in the current study, six (06) hypothesis direct relationship has examined, all the relationships with the use of e-Marketing and firm performance has found positively significant.

Table 6. *Direct Hypothesis Relationships*

Relationships	B Value	SD	T Stats	P Values	Effect Size	Q2	R Square
MO -> FP	0.203	0.048	4.192	0.000	0.059	0.177	0.348
MO -> UEM	0.118	0.066	1.789	0.037	0.016	0.109	0.188
TMS -> FP	0.329	0.062	5.285	0.000	0.111		
TMS -> UEM	0.391	0.056	7.031	0.000	0.179		
TOP -> FP	0.155	0.063	2.440	0.007	0.030		
UEM -> FP	0.177	0.052	3.418	0.000	0.039		

### Mediation Analysis

Re-sampling mediation technique by performing bootstrapping has performed in this research to observe the indirect effect of every predictor on dependent variable (FP) through the use of e-Marketing which is the intervening variable of the study. Moreover, as recommended by Hair et al. (2014) that, SmartPLS (SEM) 3.0 bootstrapping procedure for analysis of mediation is found as appropriate for quantitative studies since it is also suitable for small samples.

In current research, the assessment of structural model found that, all two predictors that is market orientation and top management support included in the structural model were found significantly associated with the use of e-Marketing and firm performance. Moreover, Table 7 exhibits the findings of the mediation effect between the latent variables and a dependent variable.

Table 7. *Mediation Analysis*

Relationships	B Value	SD	T Stats	P Values	5.0%	95.0%
MO -> UEM ->FP	0.037	0.022	1.647	0.050	0.001	0.076
TMS -> UEM ->FP	0.126	0.036	3.491	0.000	0.078	0.197

Finally, these two mediation hypothesis has found supported for instance MO received the t-value of 1.65, and TMS found the t-value of 3.50.

## Technological Opportunism (TOP) and Top management Support (TMS) as a Moderating Variable Analysis

A test of moderation, as illustrated by Ramaya et al. (2011) that whatever the moderator variable is selected for the study it affects the direction or strength of the relationship between the independent and dependent variable. He further explained that moderator variable (s) are typically introduced when there is inconsistent relationship or weak relationship between the independent variable and dependent variable. Apart from this side, there are a series of techniques for testing the moderating effects such as hierarchal regression procedure, which is based on three steps, but the drawback of this technique was to calculate interaction terms manually by using functions, transforms, compute and taking the product of each pair. Another technique is to apply the moderating variable as additional construct using the cross products of the indicator of the independent variable and the moderator (Chin et al., 2003).

To calculate the moderating effect, the researcher run a PLS algorithm to obtain the beta coefficient values which are 0.221 for the technology opportunism (TOP) related to use of e-Marketing (UEM) and firm performance (FP). On the other hand, the beta coefficient value of top management support (TMS) has received .179 related to MO and use of e-Marketing. However, to obtain the t-values the researcher run bootstrapping of 500 re-sampling and found the results as shown in Table 8, which demonstrate that technology opportunism moderates the relationship between the use of e-Marketing and firm performance ( $\beta=0.221$ ,  $T=4.82$ ,  $p\text{-value} < 0.05$ ) and more interestingly, top management support also moderates the relationship between market orientation and use of e-Marketing ( $\beta=0.179$ ,  $T=2.45$ ,  $p\text{-value} < 0.05$ ).

Table 8. Moderation Analysis

Relationship	B Value	SD	T Stats	P Values	Results
TMS Moderator -> UEM	0.179	0.073	2.450	0.007	Supported
TOP Moderator -> FP	0.221	0.046	4.820	0.000	Supported

## Discussion and Conclusion

The study has satisfied the main objective of the study related to moderating effect, mediation analysis, direct hypothesis and the measurement model assessment. Furthermore, the study results clearly revealed that, technological opportunism moderates the relationship between the use of e-Marketing and firm performance. It implies that, technology opportunism is an originator of performance, which is consistent with the idea that capabilities create competencies to address changing environments, however, findings revealed that, firms that systematically analyze the market is looking for new opportunities and responding to those opportunities, perform better. Hence, these study

results should encourage managers to invest resources in being technologically opportunistic.

Additionally, top management support moderates the relationship between market orientation and use of e-Marketing. It implies that, bringing the technology in the organization only is not enough, until it is properly implemented in the particular departments and keep updated by reviewing the external environment and the demand of the internal and external customers of the organization. Whereas, top management support is essential for the firms in adopting the latest technology in the firm, as the decision and investment to invest in the particular technology lies in the hand of top management. In line with the statement, for the successful implementation of technology requires significant support from the top executives to encourage the adoption of new technology and provides visionary leadership which clearly eloquent the need for the technology across the organization. Concurrent with this argument, management support has a strong influence on the implementation of infusion and diffusion systems of intranet in the organizations. Therefore, a researcher claims that, management support motivates to adopt e-Marketing technology by giving strength to the firm's technology to be more efficient in internal processes as well as in external communication to reduce customer and trading partner's communication gap and ultimately to upsurge its credibility in the market (Sheikh, Shahzad, & Ku Ishak, 2017; Sheikh, Shahzad, & Ishak, 2016a, 2016b).

Moreover, all direct hypothesis have found significantly related with the use of e-Marketing and firm performance. These results are also concurrent with the previous studies that the use of e-Marketing has a sturdy positive relationship with firm performance, the studies also conclude that there is a positive association among e-Marketing and the marketing activities, also, few studies indicated that, there is a strong relationship between the e-Marketing usage and firm performance, therefore a successful use of e-Marketing is one of the leading problem to succeed in achieving the business objectives (El Gohary, 2012; Voola et al., 2012; Chen & Lien, 2013; Eid & El-Gohary, 2013; Rahayu & Day, 2015; Sheikh, Shahzad, & Ishak, 2016).

Interestingly, the intervening variable that is use of e-Marketing has played a significant role between market orientation and top management support. It implies that, using e-Marketing in the firms through its antecedents which are TMS and MO enhance the overall performance of the business. This implies that, the direct as well as indirect effects of TMS with the mediating effect of the use of e-Marketing enhances the performance of the textile firms. In fact, in Pakistan textile firms, the main decision making authority is the owner or chairman of the company because he/she is the sole owner of all the assets, whether tangible or intangible, therefore, all the departments are responsible to report top management about each and every detail.

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However, in the current study, use of e-Marketing strongly mediates the relationship of TMS and superior performance of textile firms. Besides, regarding MO, to this end, the results suggest that a firm's MO is an ingredient for using the technology like e-Marketing, which would provide the firm with capabilities to achieve superior performance.

Consequently, in this study, marketing orientation, top management support and technological opportunism are the intangible resources as explained by the RBV theory. Furthermore, DOI theory and TOE model has also explained all these independent variables, relationship directly with use of e-Marketing and extension of the framework towards firm performance is a major contribution and extension in DOI theory with combination of RBV theory to justify the relationship properly as it is also recommended by Baker (2011) in its future studies that by extending the model from innovation (e-Marketing) to firm performance with the help of RBV theory, will be considered as a major contribution in the existing literature.

Current research undertakes several vital contributions to both theory and research of e-Marketing which is considerably a new area of information. However, still the theory in the area of e-Marketing is at beginning stage and getting provoked badly by the indistinct way of dealing with the main definition and concept of e-Marketing, linked to several marketing measurements and subsists in a fast changing environment. Moreover, current research might be distinguished as a step towards the theory building of e-Marketing. Thus, in this regard, the research has combined a significantly large body of related marketing literature, textile business literature, ICT and innovative technology acceptance literature by combining diverse theories into a single integrative aspect. The research also comprehend the theories of RBV and DOI which are considered as most effective theories in predicting the adoption and use of latest technologies. Also, this research is one of the first to validate and explain empirically the different e-Marketing forms, antecedents while enhancing the textile performance.

This research has filled the gap in the existing literature of a firms' technology usage, where existing clarifications have engrossed on market characteristics, firms' technology through the awareness of e-Marketing uses. Lastly, the current research has delivered significant results, mainly in the firm performance both directly and indirectly by including the use of e-Marketing as an intervening variable. Our study has revealed that, to understand the array of e-Marketing uses to improve organizational performance is more vital in handling the technological development.

### **Limitations and Future Research Directions**

This research was primarily conducted on Pakistan textile firms and may not be representative for other industries or countries. This research is limited to in-depth study of only five variables, supported by

the questionnaire survey. The limited sample size were 278 marketing managers employed in this research. However, caution is needed in the understanding of findings as these outcomes are not appropriate for other regions or states of the country also on the other service industries. However, future studies revealed from our research are to examine the e-Marketing uses, its tools and performance of the businesses with diverse theories and constructs by selecting other sizes of the firms like micro-enterprises, medium-size enterprises or even large organizations be subject to the anticipated causes produced in this research.

### **Research Implications**

Textile Businesses of Pakistan have been recognized as one of the major contributors to employment, economic growth and poverty alleviation. Government and policymaker have to recognize that their decisions relating to textile have a direct impact on activities of the enterprises. It is, however, necessary to reveal that, what government and policy makers can do to improve the performance and sustainability of textile industry in Pakistan. From the literature review, this study has identified that the textile sector lacks e-Marketing in their business activities and operating in an unfriendly environment is the primary cause of textile under-performance (SMEDA, 2016; Survey, 2015)

Based on this study's findings and several past studies, it is empirically established that TOE factors (RA, MO, and TP) generally contribute to technology adoption or diffusion, which is the use of e-Marketing based on RBV and DOI theory as well as TOE framework. Moreover, few of these current study TOE factors also contributes in performance of textile sector directly whether positively or negatively. Therefore, textile sector owners-managers need to acknowledge the importance of the use of e-Marketing in enhancing firm performance indirectly as a mediator with all positive relationships, based on RBV theory. It implies that market orientation is the major contributor of RBV theory, which also increase with usage of e-Marketing and helps to achieve superior performance. Similarly, market oriented firms bring innovation in the firms to enrich the performance. Whereas, top management support is one of the major contributors in the current study, as a Pakistan textile industry is one of the leading industry, where, ownership belongs to single person, families or group of families, in this case, the decision to adopt or implement new technology lies in the court of top management. However, the study also found a significant relationship with top management support which is one of the attribute of DOI theory, where management support pass from the five stages of adoption.

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