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**IMPACT OF TECHNOLOGICAL, ORGANIZATIONAL,
ENVIRONMENTAL, USE OF E-MARKETING,
TECHNOLOGICAL OPPORTUNISM ON PERFORMANCE
OF PAKISTAN TEXTILE SECTOR**



ADNAN AHMED SHEIKH

UUM
Universiti Utara Malaysia

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
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**IMPACT OF TECHNOLOGICAL, ORGANIZATIONAL, ENVIRONMENTAL,
USE OF E-MARKETING, TECHNOLOGICAL OPPORTUNISM ON
PERFORMANCE OF PAKISTAN TEXTILE SECTOR**



By
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**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Fulfilment of Requirement for the Degree of Doctor of Philosophy**



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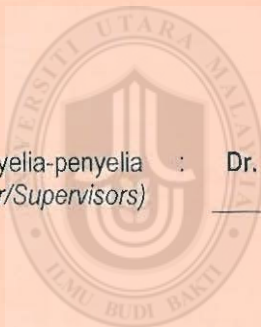
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ABSTRACT

Today, the effective use of technological revolution and innovations are arguably one of the key challenges confronted by the textile industry in Pakistan. Therefore to understand diverse perspectives of technology diffusion and textile sector performance, the study examines the effect of technological factors which are relative advantage (RA), technology orientation (TO), organizational factors which are market orientation (MO), organization resources (OR), top management support (TMS) and environmental factors which are competitive pressure (CP), pressure from trading partners (TP) and government support (GS) on the textile firms performance (FP) in Pakistan through the mediating role of use of e-marketing (UEM) and moderating effect of technological opportunism (TOP) between UEM and FP. The study framework was established from theories, namely the Resource Based View, the Diffusion of Innovation and the Technology-Organization-Environment framework. Data was collected from general manager marketing working in textile manufacturing firms of Pakistan. Out of the 480 distributed questionnaires, 257 were returned. The cluster proportionate sampling technique was used. Hypotheses tests were performed on SmartPLS SEM 3.0. The results show that RA, TO, TMS, CP and TP have significant direct relationship with UEM and FP. Whereas, OR, MO found insignificant with UEM and FP but GS found significant with FP only. The use of e-marketing as a mediating variable played a significant role between TO, RA, MO, TMS, TP, CP and FP, except OR and GS. The findings also confirmed that technological opportunism (TOP) moderated the relationship between UEM and FP. However, the outcomes of this study have key contribution for the marketing field, as it strain the vital role of marketing persons in the effective implementation of e-marketing and its antecedents and also by filling the gap in the literature to enhance overall textile sector performance. Lastly, future research should include other innovative variables and theories to check the validity of model in different industries and countries.

Keywords: use of e-marketing, textile firms performance, technological factors, organizational factors, environmental factors.

ABSTRAK

Pada masa kini, penggunaan revolusi teknologi dan inovasi yang efektif dipersetujui sebagai salah satu daripada cabaran-cabaran yang dihadapi oleh industri tekstil di Pakistan. Oleh itu, bagi memahami kepelbagaian perspektif dalam penyebaran teknologi dan prestasi sektor tekstil, kajian ini mengkaji kesan faktor-faktor teknologi iaitu kelebihan relatif (KR), orientasi teknologi (OT), faktor-faktor organisasi seperti orientasi pasaran (OP), sumber-sumber organisasi (SO), sokongan pihak atasan (SPA) dan faktor-faktor persekitaran iaitu tekanan kompetitif (TK), tekanan rakan perdagangan (TRP), dan sokongan kerajaan (SK) ke atas prestasi firma (PF) tekstil di Pakistan, melalui fungsi perantara iaitu penggunaan e-pemasaran (PEP) serta kesan peluang teknologi (PT) melalui peranannya sebagai penyederhana dalam hubungan antara PEP dan PF. Kerangka kerja kajian ini dibina berdasarkan Teori Pandangan Berasaskan Sumber, Teori Penyebaran Inovasi dan rangka kerja Teknologi-Organisasi-Persekitaran. Data telah dikumpul daripada pengurus am pemasaran yang berkerja di firma pembuatan tekstil di Pakistan. Daripada 480 jumlah borang kaji selidik yang diedarkan, 257 telah dikembalikan. Kaedah pembahagian persampelan berkluster telah digunakan. Ujian ke atas hipotesis dijalankan melalui penggunaan aplikasi SmartPLS SEM 3.0. Keputusan menunjukkan KR, OT, SPA, TK dan TRP mempunyai hubungan langsung yang signifikan dengan PEP dan PF, namun hubungan SK, SO dan OP adalah tidak signifikan dengan PEP, tetapi SK didapati hanya mempunyai hubungan yang signifikan dengan PF. Penggunaan e-pemasaran sebagai pengantara memainkan peranan penting antara hubungan OT, KR, OP, SPA, TRP, TK dan PF, kecuali SO dan SK. Dapatan kajian juga mengesahkan PT memainkan peranan penyederhana antara PEP dan PF. Walaubagaimanapun, dapatan kajian ini mempunyai kunci penyumbang ke atas bidang pemasaran disebabkan ia menekankan peranan penting terhadap golongan utama pemasaran dalam melaksanakan e-pemasaran yang efektif; dan faktor-faktor penyumbanganya juga telah mengisi jurang dalam literatur untuk menambah baik prestasi firma tekstil secara keseluruhan. Akhir sekali, kajian yang akan datang perlu melibatkan pemboleh ubah dan teori inovatif yang lain bagi menguji kesahihan model dalam industri dan negara yang berbeza.

Kata kunci: Penggunaan e-pemasaran, prestasi firma tekstil, faktor teknologi, faktor organisasi, faktor alam sekitar.

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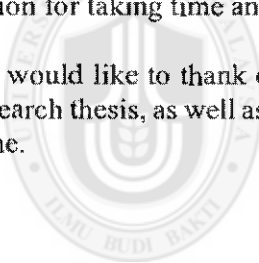
of the world is the pious woman". I whole heartedly thank my wife for her encouragement, support and love indeed there is no enough words to describe you.

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LIST OF ABBREVIATIONS

FP	Firm Performance
TO	Technology orientation
RA	Relative advantage
OR	Organization resources
MO	Market orientation
TMS	Top management support
GS	Government support
CP	Competitive Pressure
TP	Trading Partners
TOP	Technological Opportunism
UEM	Use of E-Marketing
EMA	E-Marketing adoption
DOI	Diffusion of innovation
RBV	Resource-Based view
TOE	Technology-Organization-Environment
PLS	Partial Least Square
SEM	Structural Equation Modeling
UEM	Use of E-Marketing
WTO	World Trade Organization
CR	Composite Reliability
AVE	Average Variance Extracted
GDP	Gross Domestic Product



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LIST OF APPENDICES

Appendix A: Questionnaire
Appendix B: PLS Output Files



CHAPTER ONE

INTRODUCTION

1.0 Introduction

Today, the growth of technology has raised the competition among various businesses, particularly for those businesses who are striving for the excellence and desiring for maximum profits by reaching to global markets, such businesses are formulating innovative strategies to compete with both local and international rivals. In today's era, as businesses are moving towards saturated and complex markets, the firm's marketing and internal success are only based on first mover advantage. Besides, industry growth and performance remained a significant focus of researchers, academicians and practitioners.

There is the necessity to investigate the most important and valid factors, which are influencing organizational performance with the mediating role of e-marketing uses. Currently, the main focus of the study is to "investigate the relationship between technological factors, organizational factors and environmental factors and their effect on firm performance". Furthermore, this study also investigates the mediating role of the use of e-marketing between the antecedents of e-marketing and firm performance also investigates the moderating role of technological opportunism with relationship between the use of e-marketing and firm performance. In line with the discussion, this current study focuses more on the use of electronic marketing (E-Marketing) by textile manufacturing industry that can ultimately changes the outline and nature of doing the business globally and also in emerging countries like Pakistan.

Furthermore, the opportunities offered by e-marketing for organizations such as internet, digital marketing, social media marketing, mobile marketing and several electronic media plays a vital role in the execution of marketing activities and also in enhancing the performance of the organization's. Because, now organization web sites, social media, YouTube, mobile marketing have a tendency to reach an enormous number of global and local markets in a rapid and cost-effective way. Therefore, even with moderately little investments and nearly any individual around the world who can even read and write can access to the World Wide Web.

Nowadays, majority of the people are using the internet to search for latest information to make their work more efficient and effective. Although, the businesses operating in developing as well as in developed countries are changing their nature and infrastructure by making internet as a foundation for success. Additionally, digital marketing and social media is squeezing the communication gap between the sellers and buyers by cost-effective and rapid business interactions. Moreover, Electronic Marketing provides the opportunities for developing a successful and economic businesses that have never been available before and it allows the business persons to access global resources and opportunities to diversify their businesses and also to make their businesses more customer oriented than ever before.

Furthermore, the objective of this chapter is to clearly highlight the background of information concerning with this study. Initially, this chapter will explain the overall structure and includes background information on the global issues, particular industry issues, opportunities as well as the limitations of the study. Moreover, the problems of

Asian countries were highlighted by including Pakistan in particular and textile sector as an industry for current study. However, several antecedents of use of e-marketing has been selected to determine the performance of textile sector in Pakistan, which direct to the need for the present research, followed by the research questions, the research objectives, scope and significance of the study.

1.1 Background of the Study

Recently, the fact that technological revolution and innovation are fundamental causes of productivity and sustainable growth for a business is widely accepted (Arifin & Frmanzah, 2015; Johnson, Scholes, & Fréry, 2002; Markides, 1997; O'Mahony & Ark, 2003). Accordingly, technology adoption and usage is a strategic innovation that is a novel way of engaging with competitors and of improving the financial performance of existing businesses (Ireland & Webb, 2007; Riddell & Song, 2012). Therefore, the successful adoption of technology in the firm significantly "affects industrial competitors" toward achieving growth in the firm's performance (Arifin & Frmanzah, 2015; Barney, 1991; Cornford & Smithson, 2006; Das, Majumdar, Chakrabarti, & Chakrabarti, 2013; Kotler & Keller, 2006; Porter, 1985, 1990; Rayport & Jaworski, 2004).

Several studies have discussed the use of modern technology that will enhance firm performance in terms of firm productivity, financial performance, market share growth, and customer loyalty (Lopez-Acevedo, 2002; Lucia-Palacios, Bordonaba-Juste, Polo-Redondo, & Grünhagen, 2013; Mutlu & Sürer, 2015). Many researchers argued that technology adoption and usage lowers the overall operational costs (Benitez-Amado,

Llorens-Montes, & Nieves Perez-Arostegui, 2010) by improving efficiency and increasing effectiveness (Rusli, 2012; Sabbaghi & Vaidyanathan, 2008). Furthermore, the industrial sector performance in any country is considered its economic engine, which continuously contributes to worldwide economic development.

Currently, industrial sector performance has gained considerable attention from many academicians and practitioners (Arifin & Frmanzah, 2015). Substantial interest in the field of innovation has significantly supported business operations and aided firms in enhancing their global reach. However, the recent revolution in e-marketing has notably affected the performance of businesses (Eid & El-Gohary, 2013; El Gohary, 2012). Therefore, a growing number of organizations are currently using the Internet or other electronic tools to communicate with their trading partners, government institutes, customers, and end-users of their products and services (Ahmad, Rahim, Bakar, & Mohamed, 2014; El-Gohary, 2010, 2012).

Some studies and findings have also corroborated that a technological communication gap remains extant between the firms and their customers. Likewise, negative market trends, growing global competition, and staff with insufficient ICT skills are other factors for the firms' non-adopting behavior regarding the e-Business model, which significantly affects the relative advantage of electronic business (Morais, 2006; Tandon & Reddy, 2013). However, e-commerce in organizations is growing rapidly to cater to maximum global market shares; for example, a 120% increase in e-commerce trade has been reported in China (Fredriksson, 2013). Conversely, businesses in Pakistan remain reluctant to properly

implement e-marketing despite being a cost-effective way to conduct business in this global era.

For this current research, the definition by Straus and Frost (2001) has been used to define e-marketing as follows: “The use of electronic data and applications for planning and executing the conception, distribution and pricing of ideas, goods and services to create exchanges that satisfy individual and organizational objectives”. Specific reasons for the selection of this definition include the following: (1) this definition considers the prominent elements of e-marketing and all product types; (2) such a definition demonstrates the main purpose of e-marketing, which is mostly related to creating the exchanges that satisfy individual and organizational needs; and (3) this definition is also adopted by the American E-Marketing Association (eMA).

Presently, most organizations use e-marketing. Dell is among the most popular organizations and has provided an ERP system to its customers to strengthen their B2B branding. Whenever customers place an online order on Dell’s website, a dialogue or communication is established between Dell and their customers. Additionally, e-marketing is crucial for lowering the overall financial costs of businesses. For example, FedEx is estimated to save a cost ranging from \$2 to \$5 per customer through using website services communication with their customers instead of phone conversations. Similarly, Dell saved between US\$5 and US\$10 per customer (which adds up to multimillions). Other estimates suggest that massive savings in transaction costs are achieved through conducting transactions online. Beyond the marketing mix, social media have deepened the impact of

digital media (Chaffey & Smith, 2013). Consequently, electronic communication can directly affect the financial performance of businesses by reducing operating costs, helping the firms prepare for diversified investments, and facilitating their global reach.

Snyder and Hilal (2015) verified that an interesting shift in business-to-business digital marketing from the last five years because, at present, such marketing has become an opportunity that must be utilized by all businesses working in business-to-business environments. Mull (2013) suggested that nowadays, a substantial way to reach B2B buyers is through e-marketing, especially through videos and mobile phone technology as e-marketing will help the suppliers in properly and directly presenting their products and services to buyers.

Furthermore, Mull (2013) confirmed that most of contemporary buyers use digital communication channels to make their buying decisions. Generally, 57% of the online research is performed through electronic means. Nevertheless, top management continues to prefer traditional marketing over e-marketing. Bowden (2014) suggested that global access in today's business environment has become much easier and cost effective compared with traditional business methods because, previously, organizations incurred significant costs and had to adhere to time constraints. Currently, however, digital marketing has overcome the traditional barriers to a smooth entry into foreign markets. Moreover, Laraway (2011), an Industry Director of Technology, Software and Services at Google, revealed in an interview that he believes that B2B marketers must considerably focus on market products that answer business buyers' needs. He further explained that

digital marketing can connect with buyers directly and is a significantly cost effective method of marketing products, allowing the suppliers to increase enterprise sales while buyers obtain the best and most inexpensive product from the market.

The dawn of the 21st century corresponds to the revolution of novel ideas that are radically influencing the paradigms in almost every field of human activity. However, the world has experienced the demise of severe geographical and communication segregation. In addition, as an economic event driven by technology, globalization has manifested in a shift from a world of diverse national economies to a global economy. Globalization has become a reality and a key economic factor nowadays (Noshab, 2006; Sheikh, Shahzad, & Ishak, 2016; Ueasangkomsate, 2015).

In particular, Pakistan has very few businesses using e-business for online sales and promotion especially in B2C markets. Internet users in Pakistan rose to 10.3 million after the launch of 3G and LTE. The scenario that 28% of the country would have Internet access in the next five years is anticipated. However, with numerous new online projects emerging rapidly and extant businesses expecting good growth rates and improved performances, an extensive gap exists in terms of maximizing the e-commerce potential and competing with major regional players (Junaid, 2015).

Moreover, the fast spread of innovation and information technologies (ITs) has developed new electronic channels for marketing; hence, most companies have found that online presence is essential to satisfy customers through all means possible (Abrar, Tian, Usman,

& Ali, 2008; Do Hyung & Dedahanov, 2014; Eid & El-Gohary, 2013). Therefore, most problems are linked with the changing aspects of this new interactive media. For example, many of the previous studies have focused on most of the western countries in which SMEs utilize e-marketing tools given the availability of organizational and technological resources to fulfill their specific needs. Unfortunately, textile businesses in developing countries have garnered less attention from researchers. Consequently, a notable gap developed in this industry—particularly in countries, such as Pakistan—with limited knowledge of innovation and of the benefits related to electronic marketing use (Ali & Syed, 2012; Mohsin, Bashir, & Latif, 2013; Shah, Warraich, & Kabeer, 2012).

ZoyaWajidSatti (2014) recommended that organizations start focusing on awareness programs related to e-marketing because, if organizations start educating the people about the benefits of using e-marketing, then such undertaking will open new horizons for marketers and render the conduct of business in global markets substantially easier and effective. This study also revealed the occurrence of scope of e-marketing in Pakistan, but much effort is required as e-marketing use is a logical addition to the traditional marketing techniques that will improve the infrastructure of the firms and support sellers and buyers to productively interact with one another.

According to a significant report issued by the World Trade Organization (2014), the exports of world textile trade has improved from US \$709 billion in 2012 to US \$766 billion in 2013, display a pronounced increase of 8.03%. Therefore, in textile related

products, exporters have observed an overall positive growth, but the figures for each country vary with their performance and the efforts they exerted to capture the markets.

Next, the report issued by World Trade Organization (2015) explains that the maximum growth (attained by India) has increased by 23%, whereas the lowermost was achieved by the Republic of Korea, at only 2%. Therefore, the top exporters of the world remained on the same positions, except for Vietnam, which outperformed the United States in 2013, becoming the sixth largest exporter of textile and clothing. Additionally, the European Union has ranked as the topmost buyer of clothing, accounting for 38% of world imports in 2013, followed by the United States with 19%. Conversely, Pakistan holds a static position in exports compared with other developing countries. A minimal positive change in exports has been noted in Pakistan, but such change cannot support the textile firms in maintaining their existence for a long period of time.

Mącik, Jóźwik, and Nalewajek (2012) validated that firms are changing their structure to become globalized. According to the World Trade Organization report issued in 2016 regarding the textile growth trend, Pakistan faces stagnation and even downfall in the overall textile growth, whereas China, India, and Bangladesh have maintained their positions, with India and China in the top three rankings.

However, the outlook of the Economic Survey of Pakistan (2015) explains that Pakistan is one of the developing countries of South Asia with a population of more than 190 million and with major industrial production based on agriculture. Moreover, 20.9% of its GDP in

2014–2015 is spent on the agriculture sector, which is a source of livelihood for more than 43.5% of rural areas. To demonstrate the structure of Pakistan’s textile industry, Ahmad and Kalim (2014) revealed that the country has 1221 ginning units, 521 textile units, 471 spinning units, 124 large spinning units, and 425 small units that are the bases of textile products.

A study by the All Pakistan Textile Mills Association (2015) confirmed that even with well-established infrastructure, Pakistan’s total share in the global textile trade is less than 1%, contributing 9.5% to the GDP of the country and providing employment to 15 million individuals (i.e., 30% of the 49 million workforce). In addition, Pakistan is the 4th leading producer of raw cotton with the 3rd largest spinning capacity among Asian countries after China and India. The World Trade Organization (2014; 2016) revealed that more than 60% of Pakistan exports come from the textile sector but still its worldwide market share is minimal in comparison with other regional competitors. Therefore, to increase global market share, a few firms began adopting new technologies to streamline the early stages of production. Tandon and Reddy (2013) also noted that the use of new technology has not been explored properly and that a notable shortage in B2B digital marketing exists.

According to the report from the Economic Survey of Pakistan (2015), which showed a comparison among different industrial sectors, the growth percentage of different sectors from July–March 2014 to 2015 has varied according to the industry also explained in Table 1.1.

Table 1.1
Industry Growth in Pakistan

Industry Growth in Pakistan (% age)	2014–2015
Iron and steel products	35.63
Automobiles	17.02
Leather products	9.62
Electronics	8.21
Pharmaceuticals	6.38
Chemicals	5.94
Non-metallic mineral products	2.56
Coke and Petroleum Products	4.73
Fertilizers	0.95
Textiles	0.50

Source: Economic Survey of Pakistan, 2015

Moreover, Pakistan's textile industry is considered one of the largest industries in comparison with other businesses operating in Pakistan. Given technological, environmental, and organizational issues, the performance of this particular sector is declining on a continuous basis, and further investment in textile infrastructure is also decreasing. On the contrary, businesses, such as automobile, steel, and other important enterprises, are growing rapidly; however, in terms of growth, the textile sector has achieved the lowest progress (Pakistan, 2015; Highlights Of Pakistan Economic Survey, 2015).

Several related factors must first be addressed. Saeed (2014) corroborated that in 2013, Bangladesh earned \$21 billion in revenues from garment exports to Western countries, whereas Pakistan earned only \$2.6 billion. This figure consisted 90% of the foreign exchange earnings of Bangladesh. Despite Pakistan's substantially organized textile industry, Bangladesh is leading the market through technology advancements. Pakistan can

attain significantly competitive advantages by utilizing its resources and applying the latest communication technology.

Using e-marketing can facilitate the process and establish strong links in the value chain of the entire textile sector because firms become connected to one another. For example, the spinning unit is a supplier of the weaving division. whereas the finishing and dyeing units are buyers of weaving fabric for further processing; hence, for reducing communication problems among such trading partners, information and technology will be crucial (ILO, 2014; Mehmood, Awan, & Zhang, 2013; Morais, 2006; PACRA, 2011).

Based on the literature, the textile industry working in different regions of the world conducts businesses on a customer-oriented approach, and businesses related to cotton, yarn, or fabrics are based on market demand. Therefore, the concept of customization prevails in the textile industry. Studies identified that customers (mainly from the European Union and the United States) are switching to China, India, and Bangladesh. Pakistan's global market share has fared badly from the last few years (WTO, 2014; Abrar et al., 2008; Tandon & Reddy, 2013), whereas a positive graph of e-commerce and e-business has been seen in China and India. According to a recent study, China's e-commerce has risen to 120% in 2013. Moreover, the Internet World Stats (2015) affirms that China has achieved a leading position in e-commerce compared with other emerging countries (Fredriksson, 2013).

Furthermore, in a report issued by the Internet World Stats (2015), which explains the variation of the growth of Internet users from country to country, some countries utilized the advantages of the Internet to maximize their global reach with the help of e-commerce. However, in the list of the top 20 countries whose growth markedly increased from 2000 to 2015, Pakistan was not included, whereas other regional competitors achieved good positions including China (1st), India (2nd), and Bangladesh (13th) (*Internet World Stats, 2015*).

Pakistan has lagged in terms of Internet growth. Additionally, its textile sector has been outperformed by regional competitors. In the last few years, access to a global market has notably increased with the help of the Internet. Therefore, organizations operating in these countries are approaching foreign buyers, communicating with their trading partners, and developing ties with government departments to enhance their financial strength and market growth and to satisfy their customers by providing e-marketing services. Table 1.2 shows a comparison between Pakistan and other competitors in the Asian region.

Table 1.2
Percentage of Internet Users in Asia -- Regional Competitors of Textile Industry

Countries	Internet users in Asia	Penetration (% population)	% of Internet growth 2000–2015
Pakistan	1.80%	14.60%	21754.30%
China	41.60%	49.50%	2895.60%
India	23.10%	30.00%	7400.00%
Bangladesh	3.30%	31.90%	53841.00%
Rest of the Asian countries	30.20%	–	–

Source: Internet World Stats, 2015

The figures in Table 1.2 clearly illustrate that Pakistan has the lowest ranking in the percentage of Internet users. Pakistan also has the lowest Internet penetration relative to population (i.e., 14.60%). However, the country's Internet growth seems acceptable, suggesting that a considerable gap exists and that with proper awareness about the Internet and its application, different businesses can help Pakistan compete with its neighboring countries. Consequently, firms can support the country to attain a competitive advantage, and they can contribute in the GDP by increasing sales through the latest Internet-based technology, such as e-marketing.

Literature in electronic marketing and performance of firms in developing economies is noticeably limited, and the study is extended to embrace the theories of the adoption and usage of latest technology and further the impact of such technology for the adoption and use of e-marketing in industries. Further, with new advancements and technologies, some privacy and security issues emerged aside from cultural difficulties, technological barriers, lack of top management support, lack of government support and trading partners, limited opportunities to negotiate on prices, and variation in languages (El-Gohary, Trueman, & Fukukawa, 2008; El-Gohary, 2010). This finding is in accord with El-Gohary (2012), who revealed that the e-marketing technology is still reflected a novel idea, specifically for businesses working in developing countries that have limited funds and tough competition. Accordingly, businesses cannot afford risky investments or irrational decisions, which caused inadequate knowledge of electronic marketing technology among organizations.

Besides, Ahmad, Rahim, Bakar and Mohamed (2014) confirmed that significant development took place in internet usage from the last 10 years and that the internet is the most effective way to reduce business costs and improve management. Moreover, Rahayu and Day's (2015) digital marketing provided technological support for firms to increase global reach and operational efficiency; access new buyers, supplier contacts, and trading partners; create new ways of selling existing products; and improve competitive advantages. Globalization under the present world economic situation is inevitable. Several organizations have been positively and negatively affected by the globalization trend, and the textile industry is no exception along with fronting severe challenges from the last several years (Tandon & Reddy, 2013; Gregory, Ngo, & Karavdic, 2017).

Thus, this current study aims to contribute to the knowledge in the field of electronic marketing by facilitating the improvement in the performance of the textile industry and opening new horizons for effectively reaching the global market. Such aims may be accomplished if the researchers study the effect of e-marketing uses on the performance of the Pakistan textile industry with the help of several predictors that have played a vital role in past literature in different scenarios and in diverse regions. Unfortunately, these variables have not been considered in resolving the particular problem of performance in the Pakistan textile sector with the help of the technology–organization–environment (TOE) framework based on resource based view (RBV) theory and diffusion of innovation (DOI) theory by Rogers as a supporting theory (1995).

1.2 Problem Statement

As discussed in the previous section, the performance of Pakistan's textile sector has become one of the main concerns for all the industrialists, policy makers, trading partners, customers, shareholders, and even for the stakeholders, who are directly and indirectly getting affected by the sluggish performance of this particular sector. For the last few years, this sector has been stagnant with minimal improvement.

Comparatively, the regional competitors of Pakistan in the textile sector have achieved drastic growth in terms of business expansion, extension and implementation of new technologies, access to global buyers and improved communication with trading partners. Moreover, the government of regional competitors has played a major role in uplifting the industrialists toward performing well in the global market (Abrar et al., 2016; Adnan, 2014; Ahmed, 2012; Ahmed, 2010). Particularly in the Asian context, neighboring countries, such as China, India, and Bangladesh, have become threats to Pakistani businesses during the last five years because an extreme switching of buyers has been observed in these countries. Therefore, the Pakistan textile market is continuously losing its foreign buyers for major reasons, including the lack of technological, organizational and environmental issues (Khan & Khan, 2010; S. Saeed, 2014; Tandon & Reddy, 2013).

In an official statement from the World Bank in 2016, they reported that Pakistan specifically enjoys important strategic endowments and development potential. "Located at the crossroads of South Asia, Central Asia, China, and the Middle East, Pakistan is at the heart of a regional market with a vast population, large and diverse resources, and

untapped potential for trade.” Regrettably, the performance of Pakistani firms is declining because of the lack of a proper business environment and global value chains. However, the report suggested that Pakistani firms must innovate, improve their managerial capabilities, and use technology to significantly connect with customers and suppliers to increase competitiveness.

For the achievement of substantial performance, technological advancements and innovation adoption by firms should be paid considerable attention. Rahim et al. (2015) explained that the adoption and communication of e-marketing by companies in underdeveloped countries are significant economic indicators of growth. Currently, to satisfy customers, modern technology adoption and practice are incessantly varied. Furthermore, Dai and Kauffman (2015) highlighted that the goal of implementing B2B electronic markets is to automate inter-organizational processes and assist in minimizing transaction costs. However, previous studies have failed to address the importance of e-marketing in the textile industry of Pakistan (Sheikh, Shahzad, & Kulshak, 2017; Abrar et al., 2016), where few studies have gained little attention. However, questions remained unanswered, such as “Does e-marketing affect the textile industry performance?” and “How can e-marketing establish a significant relationship between independent variable and firm performance?”. therefore, the current study emphasizes these questions and addresses the technological gap based on the findings and analysis.

Mehta (2013) affirmed that the textile sector of Pakistan is facing huge challenges in the exports of textile products, and approximately 20% of orders meant for Pakistan's textile

exporters were diverted to Bangladesh, India, and Sri Lanka. Jamal (2015) corroborated that the Pakistan global share of textile exports narrowed down compared with other rivals. Findings thus have been inconclusive, and empirical results have been found missing in the literature. Therefore, the current study addresses this issue appropriately and links the findings with the existing knowledge in the literature.

Theoretically, the use of technology has been mainly studied with the help of several theories, such as “technology acceptance model” (Davis, Bagozzi, & Warshaw, 1989; Davis, 1986, 1989), “theory of planned behavior” (Ajzen, 1985; Ajzen, 1991), “unified theory of acceptance and use of technology” Venkatesh, Morris, Davis and Davis (2003), and other theories related to individual behavior. However, limited studies have seen its effect on the firm level and have witnessed the impact of firm performance with the help of the TOE framework and DOI and RBV theories. The present study extends previous literature on technology adoption to firm performance in emerging countries, particularly in the textile industry, and presents the relevance of these theories and empirical findings used in this study.

The unique role of e-marketing use as a mediating variable in the relationship among technological, organizational, and environmental factors has been supported by RBV and DOI theories and the TOE framework, which postulates why, how, and at what rate new ideas and technologies are spreading through cultures and operating at individual(s) and firm(s) levels. However, past studies have overlooked the unique role of e-marketing as a mediating variable and technological opportunism as a mediated moderation. These

variables in combination with RBV and DOI theories extend the knowledge of theories. Baker (2011) emphasized that including the technology or innovation as a mediating variable in the TOE framework with the help of RBV theory to check firm performance will extend literature and the TOE framework. This study considers the suggestions and articulates the perspective of the textile industry in Pakistan. Therefore, the current study investigates the combination of these variables and theories that have been disregarded by past studies.

Despite several studies on technological factors, past studies have failed to resolve and are inconclusive in explaining the relationship among technological factors, which are technology orientation and relative advantage with firm performance (Sheikh, Shahzad, & Kulshak, 2017). Furthermore, technology orientation and relative advantage have been tested in recent studies as predictors of technology adoption in the SME context and service sectors of western countries (Abrar et al., 2008; Brady, Li, 2008; Liang, You, & Liu, 2010; Sürer & Mutlu, 2015; Trainor, Rapp, Beitelspacher, & Schillewaert, 2011; Wang, Wang, & Yang, 2010). However, there is a lack of investigation to address the relationship between technology orientation and relative advantage with firm performance and how this relation can be strengthened by the use of e-marketing as a mediating variable exists (Ahmed, 2012; Do Hyung & Dedahanov, 2014; Eid & El-Gohary, 2013; El Gohary, 2012; Haider, Chen, & Abbassi, 2015; Iddris & Ibrahim, 2015; Mohsin, Bashir, & Latif, 2013; Rahim et al., 2015; Shah, Warraich, & Kabeer, 2012; Gregory, Ngo, & Karavdic, 2017). Based on recent literature, organizational resources play a vital role in every organization in achieving improved firm performance because many organizations claim that if the

resources are valuable, rare, and imperfectly imitable, then they will lead the firm toward a competitive advantage. However, organization resource utilization through e-marketing for substantial firm performance has remained questionable and inadequate as claimed by past studies. Researchers failed to address the importance of this relationship and ignored such relationship with no reasonable findings. Therefore, the current study examines the effect of organizational resources on textile sector performance through the usage of e-marketing and theoretically and practically contributes to existing literature and theory in particular (Barney, 1991; Fredriksson, 2013; Gilmore et al., 2006; Lal, 2004; Overview Of The Economy, 2015; Economic Survey of Pakistan, 2015).

Another organizational factor that affects strategic marketing and firm performance has identified market orientation as a unique variable in enhancing firm performance. However, past studies have emphasized the relationship between market orientation and firm performance through innovation and revealed that the relationship strengthens rather than conducts traditional marketing (Chuang, 2016). However, past studies have focused on the use of e-marketing in strengthening the relationship between MO and firm performance in the textile sector of Pakistan. The textile sector is a value chain and customized approach industry that respects customers, but old marketing techniques are still used by marketers to sell products (Hyung & Dedahanov, 2014; Mutlu & Sürer, 2015). Whether the use of e-marketing will strengthen the relationship between MO and textile performance remains unclear, and minimal investigation has been conducted in the context of Pakistan with no proper conclusion and quantitative findings. Therefore, the current study investigates how MO relationship can strengthen firm performance by the use of e-

marketing and how electronic communication is more significant compared with traditional marketing (Rahim et al., 2015; Trade & Wto, 2014; Voola, Casimir, Carlson, & Anushree Agnihotri, 2012).

In the textile value chain of Pakistan, each firm is connected with another firm, such as spinning is a supplier of the weaving division and finishing and dyeing unit is the buyer of weaving fabric for further processing (ILO, 2014; Morais, 2006; PACRA, 2011). However, the question on why the electronic means to communicate with trading partners and with customers is lacking in the Pakistan textile sector is yet to be answered. Accordingly, minimal attention has been devoted to address this issue by past studies. The use of e-marketing overlooked the importance and uniqueness of this combination (Idris & Ibrahim, 2015; Ke & Wei, 2007; Laura Lucia-Palacios, Victoria Bordonaba-Juste, & Yolanda Polo-Redondo, 2013; Oliveira & Martins, 2011; Porterfield, 2008; Rahayu & Day, 2015).

Moreover, less studies have tested the effect of environmental factor, such as competitive pressure, on firm performance (Ahmad et al., 2014; Fredriksson, 2013; Rahim et al., 2015). Previous studies are mostly related to competitive advantage and competitive strategy effects on firm performance (Newbert, 2008; Ortega, 2010; Saeidi, Sofian, Saeidi, Saeidi, & Saeidi, 2014). Therefore, past studies have been limited in their scope and findings and have motivated the researcher to identify the relationship between these variables directly and include the use of e-marketing to check the strength of the relationship. Therefore, this study empirically investigates the direct and indirect relationships of competitive pressure

with firm performance to contribute to existing research and related study theories along with enhancing the textile sector performance in Pakistan.

Several studies have stated mixed findings on the direct effects of e-marketing usage on performance of the firm. However, few evidence supports the positive influence of e-marketing on performance of the firm for instance; “firm growth” (Mohamad, Building, & Ismail, 2009; Raymond, Bergeron, & Blili, 2005), “financial gain” (Johnston, Wade, & McClean, 2007), and “competitive advantage” (Teo, 2007; Teo & Pian, 2003). The benefits achieved were inconsistent in diverse sectors given the sizes and regions (Johnston & Wright, 2004).

However, in similar view, the comprehended benefits are positively linked with e-marketing uses (Raymond et al., 2005; Sam & Leng, 2006). Despite all the arguments, the use of e-marketing enhances firm performance. Moreover, studies that linked these two variables are limited. Previous studies have commonly used e-business, e-commerce, and innovation as mediators of firm performance. However, e-marketing as a mediator of firm performance is still neglected by previous researchers. Moreover, scholars have traditionally focused on western organizations. E-marketing practices increase performance and are necessary for Pakistani organizations, particularly in the textile sector (Lucia-Palacios et al., 2013; Voola et al., 2012). Furthermore, Iddris and Ibrahim (2015) recommended that establishing an association among the use of e-marketing factors and performance of the firm is necessary. Therefore, the current study examines the influence of e-marketing uses on performance of textile sector in Pakistan.

Implying IT integration, innovation diffusion is an antecedent that possibly increases performance. Therefore, technology opportunism capability enhances IT diffusion strategy, which, in turn, impacts firm performance. Furthermore, technology opportunism directly affects firm performance (Voola et al., 2012). The literature explaining the relationship of technological opportunism with firm performance has been found in the some studies (Sarkees, 2011; Srinivasan, Lilien, & Rangaswamy, 2002), and these studies have explained the relationship of technological opportunism with e-business. However, the moderating role of technological opportunism in the relationship between e-marketing usage and firm performance is unknown and not yet explained by any previous research.

Therefore, the current research analyzes the moderating effect of technological opportunism between the use of e-marketing and textile sector performance in Pakistan because technological opportunism remained significant as a predictor and as a moderator with other dependent and mediating variables. Therefore, the researcher has selected this variable to confirm its applicability in the current research to strengthen the inconsistent relationship between the use of e-marketing and firm performance.

Theoretically, this study expected to contribute in current knowledge to enhance the performance of the textile sector with the aid of underpinning and supporting theories. Consequently, its explicit contribution is the theoretical explanation of the indirect influence of e-marketing uses at the firm level that could be a key predictor of performance of the firm. The findings of the present study will possibly facilitate the policy makers,

industrialists, department heads, marketing managers, general managers, and the textile mill management.

1.3 Research Questions

Based on the discussed problem, the following research questions have been derived:

1. Do technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), and environmental factors (government support, pressure from trading partners, and competitive pressure) influence performance of textile sector in Pakistan?

2. Do technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), and environmental factors (government support, pressure from trading partners, and competitive pressure) influence the use of e-marketing in the textile sector of Pakistan?

3. Does the use of e-marketing and technological opportunism influence performance of textile sector in Pakistan?

4. Does the use of e-marketing mediate the relationship among technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), environmental factors

(government support, pressure from trading partners, and competitive pressure), and performance of textile sector in Pakistan?

5. Does technological opportunism moderate the relationship between the use of e-marketing and performance of textile sector in Pakistan?

1.4 Research Objectives

1. To examine whether technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), and environmental factors (government support, pressure from trading partners, and competitive pressure) influence performance of textile sector in Pakistan.

2. To examine whether technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), and environmental factors (government support, pressure from trading partners, and competitive pressure) influence the use of e-marketing in the textile sector of Pakistan.

3. To examine whether the use of e-marketing and technological opportunism influences performance of textile sector in Pakistan.

4. To understand whether the use of e-marketing mediates the relationship among technological factors (technology orientation and relative advantage), organizational

factors (organizational resources, top management support, and market orientation), environmental factors (government support, pressure from trading partners, and competitive pressure), and performance of textile sector in Pakistan.

5. To examine whether technological opportunism moderates the relationship between the use of e-marketing and performance of textile sector in Pakistan.

1.5 Scope of Research

This study focuses solely on the textile sector of Pakistan and uses the textile sector performance in Pakistan as a dependent variable, and the independent variables are technological orientation, relative advantage, market orientation, organizational resources, top management support, government support, pressure from the trading partners, and competitive pressure. Furthermore, the study focuses on the mediation role of e-marketing uses on the relationship among the independent variables and the textile sector performance in Pakistan.

Moreover, the moderating variable, which is technological opportunism, is used to check the relationship between e-marketing usage and textile sector performance in Pakistan. Other than the aforementioned variables, this study excludes any other variable. The current study is conducted in Pakistan through a survey research technique. A questionnaire is administered to the general manager marketing of textile firms. The current study is restricted to textile manufacturing firms located in Punjab and Sindh provinces of Pakistan as most of the textile mills are located in these two provinces, where, other two out of four

provinces of Pakistan which are Baluchistan and NWFP are desert and mountainous provinces with only few textile mills, that's why, they are not included in current study.

1.6 Significance of Research

The current study has both theoretical and practical contributions as followed:

1.6.1 Theoretical Contribution

The current study aims to investigate the factors that affect firm performance. A review of literature and the findings of current studies enabled the researcher to enrich the literature on business performance to specifically integrate a number of technological factors (technology orientation and relative advantage), organizational factors (organizational resources, top management support, and market orientation), and environmental factors (government support, pressure from trading partners and competitive pressure).

The aforementioned factors influence firm performance in the context of the textile industry of Pakistan based on one underpinning theory, i.e., RBV, and a supportive theory, i.e., DOI and the TOE framework to support all the variables and their influence on firm performance through the mediating role of e-marketing usage and the moderating role of technological opportunism.

Moreover, given the noticeable shortage in the literature associated to e-marketing, the current study is extended to include the theories of innovation and technology usage and its potential and effect for e-marketing adoption in the textile industry context. RBV theory

and the TOE framework consistent with DOI theory was used to recognize the variables that can affect e-marketing uses in the textile industry together with past literature and theories within the field.

Distinctively, this study examines the mediating role of e-marketing usage in the relationship among the variables of technological, organizational, and environmental factors. The research is conducted because technological, organizational, and environmental factors do not commonly directly affect firm performance and influence through innovation or new technology (Baker, 2011). Furthermore, if the TOE model is tested with firm performance through innovative processes and with the help of RBV theory, then such approach will be a contribution to the existing knowledge of literature. Therefore, the aforementioned reason is the cause of the missing link between independent variables and firm performance. Accordingly, this study provides the evidence on the mediating role of e-marketing usage in the relationship between technological, organizational, as well as environmental factors and firm performance.

The research contributes to the body of literature by examining the role of technological opportunism as a moderating variable, which is affecting the relationship between e-marketing usage and the textile sector performance in Pakistan. The current research illuminates how technological opportunism as a moderator can strengthen the relationship between e-marketing usage and firm performance. By incorporating technological opportunism as a moderator, the findings from this study contribute knowledge to the existing literature on firm performance, specifically in the textile sector of Pakistan. The

combination of all these studied variables is consistent with DOI and RBV theories and the TOE framework to understand firm performance in the context of the textile industry in Pakistan.

1.6.2 Practical Contribution

In the textile sector of Pakistan, another performance barrier is the top management who participates in the decision-making of firms. To deal with the information system, the top management of the textile sector hires a professional to deal with the management information system (MIS). Furthermore, TM is afraid of adopting such technologies due to lack of awareness and knowledge, which is another reason why the textile sector of Pakistan is behind in the global competition (Pakistan Credit Rating Agency, 2011). Therefore, the top management support toward MIS and its implementation (particularly e-marketing adoption and usage) problem should be addressed in detail in the current study (Deng, & Corbitt, 2012; El-Gohary, 2012; Wang, Wang, & Yang, 2010).

Environmental factors, such as government support, play a dynamic role in the technology uses by the firms, as explained by Seyal et al. (2004) and the role of government of Pakistan in ICT adoption is essential at a significantly broad level. However, the Pakistan textile sector remained stagnant for the last decade because of market constraints and lack of ICT implementation Government (2015). Therefore, past studies have emphasized government support as a predictor in the SME context and service sectors of western countries and in developing countries, such as China, India, Thailand, Taiwan, and Saudi Arabia (Al Hudhaif & Alkubeyyer, 2011; Duan et al., 2012; Laura Lucia-Palacios, Victoria

Bordonaba-Juste, Yolanda Polo-Redondo, 2013; Ueasangkomsate, 2015) to analyze its effect on firm performance.

However, a study by Zhang, Li, Zhou and Zhou (2014) revealed no significant relationship between government influence and firm performance. Therefore, mixed findings and lack of focus have been identified in past studies. Therefore, the relationship requires direct testing of firm performance and the usage of e-marketing to determine the uniqueness and also strengthen the mediating variable to enhance the performance of the Pakistan textile sector (Abrar et al., 2008; Ministry of Textile Industry, 2014).

Thus, this study provided a number of insights into some of the technological, organizational, and environmental factors, which are vital for increasing the use of e-marketing which eventually lead to the improvement of textile sector performance in Pakistan. These factors will aid the leaders (e.g., top management, directors, general manager marketing, and marketing managers) in the implementation of e-marketing technology and resolving these prevailing independent factors from their organizations to increase organizational performance and reach global markets and buyers through a simple and cost effective process. Furthermore, this study is helpful for policymakers, industrialists and other stakeholders for using e-marketing to gain business and marketing success in domestic and global markets.

1.7 Conceptual Definition of Key Variables

Table 1.3
Conceptual Definition of Key Variables

Variable	Conceptual Definition	Sources
Technology Orientation	"Degree to which firms emphasize product development using state-of-the-art technology, R&D, the acquisition of new technologies, and the application of the latest technology"	Hubert and Xuereb (1997)
Relative Advantage	"The degree to which a person believes that using a particular system would enhance his or her job performance"	Davis (1989)
Market Orientation	"The organization wide information generation and dissemination and appropriate response related to current and future customer needs and preferences"	Kohli and Jaworski (1990)
Top Management Support	"The degree to which top management support understands the importance of the IS function and the extent to which it is involved in IS activities"	Ragu-Nathan et al. (2004)
Organizational Resources	"Firm or organizational resources include all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement the strategies that improves its efficiency and effectiveness".	Barney (1991)
Government Support	"Government support in electronic mean refers to the delivery of information and services online through the Internet or other digital means"	Muir and Oppenheim (2002)
Pressure from Trading Partners	"a firm's dominant customers or suppliers who help the firms to adopt the innovation or firm may adopt the innovation to show its fitness as a business partner"	To and Ngai (2006)
Competitive Pressure	"Competitive pressure is defined in terms of its effect on a firm's incentives to undertake product and process innovations"	Boone (2000)

Use of E-Marketing	“Defined as, characterization of e-business adoption as making a decision to use and implement networked, computer-based technology in value chain activities”.	Zhu et al. (2006)
Technological Opportunism	“Technological opportunism as a firm capability that enables the firm to respond to emerging - technological threats and opportunities in the environment”	Abernathy and Clark (1985)
Firm Performance	“Performance is the ability and capacity of the firms to achieve its objectives by using all the firm's resources in an efficient and effective manner”	Daft (2000)

1.8 Organization of Thesis

In the first chapter, the background of the study, problem statement with research gaps, research question aligned with a problem statement, research objective, and significance of the study have been presented. In chapter no. 2: selected literatures on firm performance and various factors under technological context which are (technology orientation, relative advantage), organizational context which are (organization resources, top management support, market orientation) and environmental context which are (government support, trading partner pressure & competitive pressure) has been reviewed. In addition to this, a literature review on use of e-marketing as mediating and technological opportunism as moderating variable is also provided. Based on the reviewed literature, a theoretical framework and hypothesis of the study has developed.

In Chapter no. 3, it mainly focuses on research method; also provide a detailed description of the sample, research instrument of the study, data collection method and brief overview of statistical analysis. Moreover, in chapter 4, it presents the results of a questionnaire survey by testing the hypothesis formulated for the study. Finally, chapter 5 summarizes the analysis

and results of the study as presented in chapter 4, summarize the discussion into conclusions by highlighting both contribution of the study such as (theoretical and practical), and further discusses the limitation of the study and offer recommendations for future research.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature review chapter has been carried out to justify the research problems addressed in this study. The main focus of this study is to investigate about performance of textile sector in Pakistan and how (Technological, Organizational and Environmental) factors affects the firm performance, with the mediating role of use of e-marketing and moderating effect of technological opportunism. This chapter consists of four sections.

Likewise, the first section describes the issues pertaining to firm performance, both in general and in textile sector of Pakistan, the second section reviews the literature on uses of e-marketing and implementation both in general and in the context of Pakistan textile industry. While, the third section provides clear insight of the relationships between technological, organizational and environmental factors with respect to firm performance and also discuss about the intervening variables that is, mediating role of e-marketing uses and the moderating effect of technological opportunism. Finally in 4th section, the study describes one underpinning theory, one supporting theory and one model such as the resource based-view theory, diffusion of innovation theory and TOE (Technology-Organization-Environment) framework, this section has been discussed at the end of the - literature review chapter.

2.1 Firm Performance: Definition, Concept and Measurement

Organizations seek the competitive advantage to compete each other by doing better in performance (March & Sutton, 1997). In line with the argument, researchers not only contrasted in defining performance but also contradicted in its conceptual explanation. A study by Hefferman and Flood (2000) explained that there is no theoretical clarity to define various areas of performance as a concept in modern management. Non-universality of definition also extends to the area of measurement, that's why, sometime researchers confused with the term performance with productivity but there is a difference between performance and productivity (Ricardo & Wade, 2001). Productivity refer in a specified amount of time to the volume of work done while, performance term is broader that could include productivity, consistency, quality etc. (Abu-Jarad et al., 2010). Additionally, according to daft (2000) defined as, "performance is the ability and capacity of the firms to achieve its objectives by using all the firm's resources in an efficient and effective manner". While, Ricardo and wade (2001) defined performance as "the ability of the firm to succeed in achieving its specified objectives and goals".

According to Neely et al. (1995), firm performance is a concept that is often discussed in various studies, but rarely has a single definition. Firm performance is "the process of quantifying actions of a business firm that leads it to achieve its goals and objectives". From a business perspective, firms achieve their objectives if they perform in satisfying their stakeholders and customers' needs more than their competitors. For business firm to achieve this superior performance, the goals and objectives of the firm must be achieved in an efficient and effective way as compare to its competitors.

Moreover, Doyle (1994) argued that there was not a single best indicator to measure organization performance. Firms adopt different objectives and subjective measurements for performance. Some studies also included effectiveness and efficiency to measure performance. Effectiveness related measures normally deals with the issues like growth of the business and also employee satisfaction. Further, efficiency measure's related to the input or output of the relationship. However, identifying the factors that affects the performance is important for owners or managers in order to make them more competitive and profitable (Abu-Jarad, Yusof, & Nikbin, 2010). Other than that different research scholars have conceptualized and measured the performance in 42 different ways.

Although, prior studies has considered business performance from various aspects, like financial-performance, business-unit performance and organization performance (Liang et al., 2010; Lucia-Palacios et al., 2013). To measure performance, researcher might consider both financial and non-financial organizational performance. However, financial performance relates to the measures of how well a firm can use its assets or goods by its basic mode of business in order to generate the revenues. But, nonfinancial performance of the company is considered as a long-term objective, which mainly focuses on the significance of increasing the customer loyalty, persuading or bringing in new customers by increasing the image and reputation of the firm. Performance can be measured in many ways, few are also discussed by (Kyriakopoulos, Meulenber, & Nilsson, 2004), for instance; In the practice of business sciences, "to measure firm performance is a multidimensional construct comprising market share, profit margin, and growth of the cooperative firm relative to main competitors in the market".

Previous studies have used several instruments to measure performance of the firm. However, these items categorize into three sections i.e. general categories: efficiency, finance and others. In line with this discussion, financial indicator's include commonly used measures, for instance; "return on investment (ROI) as discussed by (Mahmood & Mann, 1993; Rai, Patnayakuni, & Patnayakuni, 1997), ROS (Bharadwaj, 2000; Mahmood & Mann, 1993; Tam, 1998; Tanriverdi, 2006), return on equity (ROE) (Alpar & Kim, 1990; Rai et al., 1997; Shin, 2006) sale (Mahmood & Mann, 1993; Palmer & Markus, 2000; Rai et al., 1997; Weill, 1992; Zhuang & Lederer, 2006) and revenue (Devaraj & Kohli, 2000; Francalanci & Galal, 1998; Rai, Patnayakuni, & Seth, 2006)". These given indicators normally highlight the capability of firms in making the profits.

Furthermore, as discussed previously, the measures uses the market indicators, of the firm performance i.e., Market share and relative market growth and financial indicators measured at both market and profit margin level. Other indicators which have been used in some situations are; customer satisfaction (Devaraj & Kohli, 2000; Ranganathan, Dhaliwal, & Teo, 2004; Ray, Muhanna, & Barney, 2005), other is, value addition (Osei-Bryson & Ko, 2004; Saeed, Hwang, & Grover, 2002) and the other important indicator are market share (Barua, Konana, Whinston, & Yin, 2004; Byrd & Davidson, 2003; Sircar, Turnbow, & Bordoloi, 2000). However, measuring all the variables in current study is not possible, as this study is a primary research and all the data availability and access will be limited in particular industry and secondly required information according to framework is also not linked with few of the indicators that is why, current study will only include these

indicators such as; customer loyalty performance, financial performance and Market performance.

2.1.1 Types of Innovation and Its Impact on Firm Performance

A study conducted by Gunday, Ulusoy, Kilic and Alpkın (2011) explained that innovative performance is considered as the grouping of several organizational accomplishments that results in several restoration and expansion efforts like considering about several aspects of the organization innovativeness, i.e. Processes, products and organizational-structure etc. So, innovative-performance is a combination of constructs (Hagedoorn & Cloodt, 2003), which normally based on a number of performance-indicators affecting, such as; new product announcements, new patents, processes, projects and also new organization arrangements.

Gunday et al. (2011) proposed that all the various type of innovation, for instance; e-marketing process has a positive effect on the firm innovative-performance. On the other side, the effects of these four kind of innovation's can expected to help in achieving the improvement in market performances. Also, innovative performance plays an essential role as an effective-hub that transmits the positive effect of innovation on several aspects of the firm performance.

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.

2.2 Pakistan Industrial Sector Performance

A report on Pakistan Economic Survey (2014) has clearly illustrated that Industrial sector of any country plays a significant role in up-lifting the overall economy of the country and also to enhance socioeconomic conditions of the people. Though, due to certain multidimensional, direct as well as indirect connection of the industrial sectors that overcame at the benefits of nonindustrial sectors of the country. The industrial-sector at one side raises the demands for the agricultural products by utilizing it as a raw material and on the other hand, it provides the latest instruments and machineries to modernize the crops cultivation to provide a room to for further investment of surplus and to absorb excess labor from the country. Besides, the industrial sector also creates the demand for different type of services and provides the basic necessities and other associated equipment's to modernize the service sector of the country.

The industrial sector is an essential source of generation of tax revenue and well contribute in increasing several job opportunities for semi-skilled, skilled and also the unskilled labor of the country. Thus the current Pakistan government has started complete policy measurements for the renewal of industrial sector on a frequent basis. The contribution of the industrial sector of Pakistan is like this; 20.30% of the GDP of the country and it grew by 3.62% compared to 4.45%, which was the last year figure. Generally, the Pakistan

industrial sector is divided into four main sub-sectors which are construction, distribution and gas distribution & electricity generation & manufacturing, mining & quarrying.

2.3 Textile Industry of Pakistan

As explained by Abrar et al. (2008: 2016) that more than 60% of Pakistan exports have been raised by textile sector but less than 1% share in the global market. In Pakistan, the textile sector has observed to be a very complex and diverse sector that includes 10 sub-sectors to complete the overall value chain. Therefore, a lot of processes are involved during the textile value chain to form a finished products, the textile activities starts from the picking of raw cotton to the finished garments at each stage of the textile value chain, a lot of customers and trading partners are involved.

Moreover, a latest report of Pakistan Economy Survey (2014) explains that Pakistan has essential advantage of becoming the 4th largest producer of cotton in all over the world by having an enormous potential to increase the crop yield. Additionally, for the success of export based industry, the domestic availability of a basic raw material is considered to be a competitive advantage, because ultimately, it will reduce the cost of doing the business. Consequently, Pakistan has ranked 3rd in the sector of yarn production around the world. Although, the value chain of Pakistan textile sector is relatively long and complex, starting from the plucking of cotton to a finished garments. So, in this process, the final product of one subsector is the raw material for other sector and each sub-sector in the value chain plays an essential role in the contribution of economy as well as in providing employment to the people.

2.4 Domestic Overview of Textile Sector of Pakistan in Comparison to other industrial sectors of Pakistan

For the last decade, the textiles sector of Pakistan has remained stagnant due to several reasons like external and internal factors such as less subsidies allocated to cotton farmers and other textile products sell by numerous countries at lower prices. Also, other issues like marketing constraints, global recession, lack of technology, and increasingly severe buyer's conditions has taken the place and directly affecting the performance of Pakistan textile sector. Domestically, production of cotton has persisted silent at about 13-million bales per year and the conflict of standardization of cotton bale (s) and grading by several spinners and ginners has continually sunk the value and price of Pakistani cotton that is approximately "10 cents per pound in the international textile market". Therefore, the sector like garments grown less due to low-usage of man-made product range and limited fibers and the other reason is also the inability of the manufacturing division to re-structure themselves to meet changing international requirements (Pakistan Economy Survey, 2014).

Furthermore, according to the Textile Policy (2014-19), federal government of Pakistan has announced the package, which includes; subsidy given on long-term loans & development, special duty drawback rates, exemption of duty on equipment's & machineries,. In addition to this, the Textile Policy (2014-19) allocated approximately Rs. 64.15/- billion cash subsidy to the clothing and textile sector of Pakistan to increase the exports from \$13-billions to \$26-billions until 2019. Although, the Finance-Division of

Pakistan would give a sum of Rs. 40.6-billions over five years for the duty-drawback, up-gradation of technology and also development of brands etc.

Whereas, another sum of Rs. 23.5-billion would allocated for training & development, textiles exhibitions and the establishment of a world textile center, apparel-house, weaving-city, incubators, and also a mega-textile awards. Additionally, about 120,000 workers would be trained with the help of skills development programs and also 50 SMEs from this sector would be selected every year until next 3 years for a government support and also for the proposed measures will promote value addition and generates employment for above 5 million people living of Pakistan. Thus, all these activities will hopefully increases the overall performance of textile sector, but still several important factors needs to be addressed with the help of a current study framework, which will contribute and guide the policy makers, textile mill owners and managers to increase the performance of their firms in a systematic and innovative way by using cut cost strategy.

The current study includes use of e-marketing as a mediator in the framework to help the sector by capturing maximum global market share in a systematic way. Therefore, to enhance the performance of textile firms, all the factors has been studied thoroughly with the help of previous literature to motivate the textile firms to analyze the lacking in their firms and to adopt different ways and methods to resolve their current issues and maximize their profits, market share, customer loyalty and financial position for the longer period of time.

2.5 Electronic Marketing (E-Marketing): Definition and Concept

Electronic Marketing has been perceived as a new business strategy and practice that is more linked with selling and buying of ideas, goods, services and information through internet or by other electronic means. In addition, a review of the related literature as well as published research has illustrated that “the definitions of Electronic Marketing differs according to different researcher’s point of view”, additionally, research background and specialization in the field also matters.

While, a number of different definitions of e-marketing are noted in the literatures. Likewise, Stokes (2011) illustrated e-marketing as “utilizing digital channels to undertake brand marketing”. El-Gohary (2010) define electronic marketing (E-Marketing) as “it can be viewed by many as a new philosophy and a modern business practice involved with the marketing of goods, services, information and ideas via the internet and other electronic means”. Besides, several studies clearly revealed that the definitions of e-marketing varies with the perspective of each scholar, knowledge and experience. According to Kotler and Keller (2009) “e-marketing, explains company endeavors to notify buyers, communicate, promote and sell its offerings through means of the Internet”.

However, in current study, the Straus and Frost (2001) definition has used to define e-marketing. According to Straus and Frost (2001), E-Marketing is defined as; “The use of electronic data and applications for planning and executing the conception, distribution and pricing of ideas, goods and services to create exchanges that satisfy individual and organizational objectives”. The main reasons for depending on this definition are: “it takes

into consideration the main elements of e-marketing as well as all types of products; it illustrates the main objectives of E-marking which is mainly related to creating the exchanges that satisfy both the individuals and organizational needs; and this definition is also adopted by the American E-marketing Association (EMA)".

Several phrases for instance internet marketing, digital marketing, e-business and e-commerce are applied and used alternatively in all over the literature to include and sometime expands the conception of e-marketing and internet. Also, two-way of communication has been established with the help of "social media channels", for instance, "Facebook, My Space, and Twitter" are creating and building excellent relationships/opportunities within the businesses. Therefore, a recent study conducted by Meng (2010) suggested that the definitions for "e-commerce and e-marketing" can be combined and this "new concept of e-commerce e-marketing" could be defined and considered. The research further declares that "e-commerce, e-marketing even e-business" could be established so that they are progressively integrates.

2.5.1 Uses of E-Marketing

A study by El-Gohary (2010), e-marketing is an innovation and latest technology and today business practices are strongly associated with marketing the products, services, deliver concepts and facts by the use of internet, mobile phones, intranets and extranets etc. The businesses applying e-marketing technology can familiarize the shape and nature of their business globally. Though, increased use of internet not only enhance the prospects for the organizations but may also eradicate various threats. Considering all these facts, El-Gohary

(2010) illustrates that from 2003 to 2010 e-marketing related published articles are very few numbers in the context of different countries. This highlight an opportunity to extend the knowledge of e-marketing within Pakistan particularly in textile sector of Pakistan.

Moreover, Strauss (2016) highlighted important points regarding the usability of e-marketing and how it works for the organizations as followed;

- The customer is CEO. After all those years of marketers talking about the customers being their focus. Finally this has become a reality. The consumer is now in charge. This power shift means that companies must be transparent, be authentic, monitor online discussion about brands and engage customers to help improve products.
- E-commerce. U.S consumers spent an estimated \$ 194 billion online during 2011. Representing 4.6% of all retail sales and a 16% increase over 2010. Over 70% of connected consumers use the internet to buy products or research product before buying. Mobile commerce sales expected to reach \$12 billion in 2012 growing to \$ 31 billion in 2015.
- Advertising online. Online advertising is a bigger part of advertiser's media budgets than every other medium except television. Marketers spent \$ 31 billion on online advertising in the United States in 2011. Mobile advertising is the fastest growing network nearly double from 2011 to 2012 (from \$ 636 million to 1.2 billion).
- Search engine marketing. This marketer tactic is hugely important. Paid search accounts for 47% of online advertising budgets. Google get the biggest share of the user search market at 67% and most e-marketers use search engine optimization to be sure their sites appear near the top of the first page of the search engine results.

- Owned, paid and earned media. Marketing communication planning now involves owned websites, paid banner ads and earned blogs and face book posts media. /the traditional marketing tools of advertising, sales promotion, personal selling, direct marketing and public relations are used within this new context to generate earned media.
- Social media content. These communities gather users with like-minded interests for conversation and networking. This includes social networking sites.
- Inbound marketing. The days of interrupt marketing are waning, such as spam and television commercials. Consumers are not waiting for marketer messages. Inbound marketing strategies are about enticing consumers to find companies online to fulfill their needs.

2.5.2 Role of E-Marketing in Firm Globalization

A study by Maçik et al. (2012) clearly highlights that information and communication technology usage for marketing activities plays a significant role in making the firms to operate globally and become a source in developing the firms to achieve competitive advantage comparatively to other firms who are less specialized in ICT usage. Additionally, the internet has enabled the potential customers and organizations to easily communicate in low costs with different modes, starting from “one to one” up to “many to many” (Hoffman & Novak, 1995).

2.5.3 E-Marketing Barriers to Adoption

In the knowledge based economies, to achieve high profit margins has become difficult due to high competition. Also, sales cycles and decision making time started squeezing

(Ryssen, 2004). Therefore, there is a need to rapidly align with the modern business and their requirements to integrate internet-driven marketing techniques into their mainstream business practices.

Most of the previous studies have revealed that the adoption and use of e-marketing varies by industry type (Poon & Swatman, 1999). Although, adoption of e-marketing by organizations is slower in the agricultural based sectors for instance in textile sector and other Agro-based firms (Sparkes & Thomas, 2001). A study by Teo and Tan (1998) found that there is an insignificant relationship exists between the industrial sector and the use of e-marketing. So it needs to address in the context of Asian countries, particularly in Pakistan textile sector that whether there is any relationship exist between the use of e-marketing and manufacturing industry.

2.5.4 E-Marketing Practice in Developed and Developing Countries

The adoption of business-to-business e-marketing and e-business in under-developed countries differs considerably from developed countries. Because, less developed countries lacks financial, legal and physical infrastructure for the development of e-marketing or e-commerce. Additionally, developing countries normally vary in their culture and also in business aspects which ultimately create limitations in the implementation and diffusion of the e-marketing or e-business models as designed by the Western countries (Gibbs, Kraemer, & Dedrick, 2003; Hempel & Kwong, 2001; Molla & Licker, 2005). Moreover, in a study by Rahayu and Day (2015) indicated that these differences are not only based on economic position, but they also concern environmental, social, political and cultural

factors. Therefore, research findings found from western or developed countries may not be applicable on underdeveloped economies.

2.5.5 Use of E-Marketing and performance of Textile Sector in Pakistan

Several studies by Abrar et al. (2008; 2016) highlighted that E-Marketing has not been explored properly in the textile industry of Pakistan as compared to other growing industries. Even though, the business-to-business e-marketing activities in the textile sector are still very low as compared to other manufacturing sectors of Pakistan. One of the major obstacles in this regard is the product awareness in the international market.

In Pakistan, the marketing and e-marketing activities are carried out by the finishing units because most of the printing and dyeing is done as a value addition, after this process, most of the fabric sent directly in the foreign market. There are only a few companies which truly e-market their products in Pakistan and major portion of the companies only use email for routine communication purpose. However, major portion of Pakistan textile industry consists of SMEs, which are also facing the recession issues, therefore e-marketing is vital and rapid way to sell the products in the international market and this e-marketing activity will help the firms improve their overall performance. In line with the discussion, the success of e-marketing is based on continuous evaluation of customers, but on the other hand, Pakistan industry is still far behind in the evaluation and implementation of this electronic technology. Comparatively, China and India are focusing more on e-commerce and e-marketing technology to grab maximum market shares for superior performance (WTO, 2014; Abrar et al., 2008).

2.6 Technological Factors

The technological context of current study includes relative advantage and technology orientation predictors based on the organizational perspective. The researcher will now explain them as followed;

2.6.1 Technology orientation relationship with Firm Performance

Technology oriented firms having technological resources is defined by Gatignon and Xuereb (1997) as “the degree to which firms emphasize product development using state-of-the-art technology, R&D, the acquisition of new technologies, and the application of the latest technology”. In line with the argument, technology orientation also means that an organization can use its technical-knowledge to build the new solutions to respond new needs of its customers. Moreover, as found by Chen and Hsiao (2008) that use of information technology has a positive significant impact on the performance of manufacturing firms.

Technology has to do with firm activities and processes related to technological innovations aimed at promoting innovative capabilities (Ettlie et al., 1984). In improving or developing products, business firms must be proactive in acquiring new technologies and adopt such technologies (Cooper, 1994). According to Anderson and Tushman (1990), technology is a set of developed interdependent systems used by practitioners to achieve business goals. Furthermore, research and development, technological know-how, and technical skills seem to be a nerve center for innovating better products (Wind & Mahajan,

1997). Technology is one of the important drivers of changes in business firms. Hence, it is a key in studying the business firms' activities (Tushman & Anderson, 1986).

TO is a process of "creating or improving product differentiation and product design more than the competitors (Wind & Mahajan, 1997). In other words, TO is a firm's ability and willingness to develop technological mind-set and utilize it in improving or developing products and services (Gatignon & Xuereb, 1997). It also referred to as the ability of the firm to utilize its technical knowledge to build a new technical solution to satisfy the needs and wants of the market" (Gatignon & Xuereb, 1997; Spanjol, Qualls, & Rosa, 2011). Rusetski (2011) conceptualizes TO as "the ability and willingness of business firms to obtain technical knowledge and use it to improve product development".

According to Zhou et al. (2005), TO leads to incremental innovation or breakthrough innovation. To be specific, firms adopting small and simple changes in TO that will lead to minor and simple changes to their products or services is referred to as incremental innovation. Thus, existing performance will be improved and customers will benefit from the improved products. In contrast, breakthrough innovations are entirely new and unique technologies used in product improvement or development that can easily affect the market.

Furthermore, empirical investigations has clarified that there is a positive significant relationship among technology-orientation and the firm performance, for instance; innovation performance, new product performance, sales performance, export performance

and profitability (Gao, Zhou, & Yim, 2007; Oflazoğlu & Koçak, 2012; Solberg & Olsson, 2010; Voss & Voss, 2000).

On the other hand, Hyung and Dedahanov (2014) highlighted that an organization must be technology oriented to achieve improved performance. Additionally, a firm must possess proper organizational structure that should assimilate and implement technology orientations into a coordinated framework, which further supports the innovative activities. In line with this argument, most of the studies have used technology orientation as a predictor in studies related to technology adoption (e.g. Related to innovation, e-business or e-commerce, e-procurement, e-government use) (Sürer & Mutlu, 2015; Trainor et al., 2011; Zhou, Yim, & Tse, 2005). While, limited empirical studies were conducted to examine the effect of technology orientation on firm performance, few of them have been conducted by (Hyung & Dedahanov, 2014; Zhou & Li, 2010).

Based on the literature, it is suggested that technology-orientation has a direct effect on the firm performance (Gao et al., 2007; Gatignon & Xuereb, 1997; Zhou & Li, 2010). Further, Zhou and Li (2010) suggested that technology orientation has a sturdier effect on the firm performance particularly when the market demand becomes increasingly uncertain. However, it is perceived that technology-orientation can become the key motivation for a firm to get maximum performance. In this regard, previous literature found that technology-orientation positively impacts on firm performance (Hamel & Prahalad, 1994).

In a study by Liang et al. (2010) found that there is a weak relationship among technology orientation and firm performance, however, the findings also implies that more studies may be required in the future to examine, why this relationship is weak and whether there are better ways through which it can reveal more insights about the role of organization resources in enhancing the firm performance. However, the study by Liang et al. (2010) was conducted based on the empirical papers and researcher has suggested that there is a need for further testing, so the current study will try to investigate empirically, particularly in the textile sector of Pakistan to verify the results and to understand the role of technology orientation in relationship with firm performance.

2.6.2 Technology Orientation Relationship with Use of E-Marketing

A study by Trainor et al. (2011) reveals that technology orientation signifies a firm's execution and usage of a specific set of electronic marketing technologies, which can enable rich dialogs and interactions between seller and buyers. In line with the previous discussion, technology orientation are a core predictor in the use of e-marketing technologies towards internationalization. It represents the usage and implementation of e-marketing technologies by diversified firms to interact with their customers and to make a sound dialog with them to generate more revenues.

In the past literatures, the technology orientation, technology resources, technology integration was related to developed countries and particularly in the technology usage of e-commerce, e-business, internet, e-procurement, intranet, and websites of service sectors or SME's, but still there is a need to check that how technology orientation effects use of

e-marketing in manufacturing firms particularly in textile sector of Pakistan with the help of DOI theory and Toe framework (Abrar et al., 2008; Jennifer & Kenneth, 2004; Wang et al., 2010; Kevin Zhu & Kraemer, 2005).

Technology-oriented firms invest heavily in the modern technology and perform much better as compare to less technology oriented firms. On the other hand, it is also shown in the previous studies that technology oriented firms are ready to invest in the information and technology to become more creative and innovative in the market. While, based on the past literature, still, there is a lack of modern information technology in the textile sector of Pakistan, therefore to satisfy the current need, a further investigation is required to find out whether technology orientation is useful in the implementation of latest technology to enhance firm performance (Ahmed, 2012; Cororaton, Orden, & Dewina, 2008; Khan, 2010; Shah, Warraich, & Kabeer, 2012).

Based on the previous literatures, the technology orientation has been tested as a predictor of technology adoption and usage in the context of SME's and service sectors of western countries (Brady et al., 2008; Raji Srinivasan et al., 2002; Sürer & Mutlu, 2015; Trainor et al., 2011) and several studies has also used TO in SME's and service sectors as a predictor of technology adoption in the context of developing countries like china, India, Singapore and Malaysia etc. (Hyung & Dedahanov, 2014; El Gohary, 2012; Rahim et al., 2015a). But, very limited studies have been done in the context of Pakistan at different perspective and particularly in the textile sector, which has been clearly ignored by the researchers as it is a major sector of Pakistan as compare to other industry sectors because textile has a

major contribution in GDP and also providing employment to more than 15 million people. Moreover, Pakistan exports, particularly in textile sector got effected continuously from the last decade and global market share has reduced drastically in last few years (Ahmed, 2012; Haider et al., 2015; Mohsin et al., 2013; Shah et al., 2012).

2.6.3 Relative Advantage Relationship with Firm Performance

In the study by Ahmad, Rahim, Bakar and Mohamed (2014) and a few other studies have highlighted that relative advantage positively affects the firm's performance, such as growth, financial gain and competitive advantage (Johnston et al., 2007; Qureshi, Keen, & Kamal, 2010; Raymond et al., 2005; Teo, 2007). However, the current study is focused to investigate that how the textile firms perceives those benefits which are linked with use of e-marketing such as; increase of profits & revenues, cost reduction, customer service quality, business operations stability and lastly, the development of new local and foreign market segments.

Furthermore, most of the studies have conducted a research on relative advantage in the context of the SME's and service sector of western countries and the few developing countries as well (Grandon & Pearson, 2004; Li, 2008; Alemayehu Molla & Licker, 2005; Rahayu & Day, 2015; Rahim et al., 2015a). But limited studies has seen in the context of Pakistan and particularly the textile sector has ignored by the researchers as it is a major sector of Pakistan as compare to other manufacturing sectors. So, to clarify the importance of relative advantage towards firm performance, an empirical study is needed to test the

relationship in textile sector of Pakistan to evaluate the findings (WTO), 2014; Eid & El-Gohary, 2013; Haider et al., 2015; Iddris & Ibrahim, 2015; Pakistan, 2015).

2.6.4 Relative Advantage Relationship with the Use of E-Marketing

A study on innovation by Tomatzky and Klein (1982) identified that Rogers' characteristic of RA is the only variable that has been constantly recognized as a critical factor for technology adoption, however, several studies also explained the importance of adoption factor (Chong et al., 2009; Tiago Oliveira & Martins, 2011; Rahim et al., 2015a). But RA is considered as a critical factor used in the e-commerce adoption (Kuan & Chau, 2001; Seyal et al., 2004; Sin, Osman, Salahuddin, Abdullah, Lim, & Sim 2016). Most of the previous studies have explained that relative advantage is an important predictor for the adoption of technology (Al-Qirim, 2007; Kaynak, Tatoglu, & Kula, 2005).

Additionally, RA in technology adoption is also considered as the most significant factor for information and technology growth in the firms (Ahmad, Abu Bakar, Faziharudean, & Mohamad Zaki, 2014), and another essential factor for enterprise resource planning (ERP) adoption (Kamhawi, 2008). Also, it was verified by Rahayu and Day (2015) that greater managerial understanding of the RA of e-commerce uses, increases the chances of that firm in allocation of several resources for instance; financial resources, managerial resources, and technological resource to use e-marketing in the organization.

However, several findings and literatures have revealed that there is still a communication gap between the firms and their customers, likewise, negative market trends, growing global competition and staff, insufficient ICT skills is another reason, which company

gives for not adopting the e-business and this non adopting behavior of firms affects the usefulness/ relative advantage of the ICT (Morais, 2006; Tandon & Reddy, 2013). Whereas, e-commerce is growing rapidly to attain maximum global market shares, for example in china there is a 120% increase in e-commerce business (Fredrikssou, 2013), but on the other hand, businesses in Pakistan are still reluctant to properly implement e-marketing as already cost of doing business particularly in textile sector of Pakistan is increasing day by day and many units got shut down in last few years. So it needs to address that how e-marketing adoption and usage gives relative advantage to the firms and minimize the risk factors (Gilmore et al., 2007; Lal, 2004; Pakistan, 2015; Highlights of Pakistan Economic Survey, 2015).

Furthermore, researchers have accepted the RA as an essential characteristic in the adoption of technological research (Al-Zoubi, Sam, & Eam, 2011; Sila & Dobni, 2012). RA has also been abstracted as a perceived benefits by several researchers (i.e., Kuan & Chau, 2001; Premkumar & Ramamurthy, 1995). A perceived benefit is known as “the level of recognition of the relative advantage that the particular technology could provide to the organization” (Kuan & Chau, 2001). This is consistent with Rogers (1995) assertion that “the degree to which an innovation is perceived as being better than the idea it supersedes that has a direct impact on the likelihood of adoption”. Unfortunately, the textile sector of Pakistan is still unable to recognize the importance of relative advantage and its impact on e-marketing technology usage (WTO, 2014; Abrar et al., 2008; Abrar, Zhilong, Talib, & Rui, 2009; Haider et al., 2015; Iddris & Ibrahim, 2015; Pakistan, 2015).

2.6.5 Mediating effects of E-Marketing adoption with Technological Factors and Firm Performance

In a study by Liang et al. (2010) and Hyung and Dedahanov (2014) found that there is a weak relationship between technological orientation and the firm performance, however, the findings also implies that more studies may be required in the future to examine, why this relationship is weak and whether there are better ways through which it can reveal more insights about the role of organization resources in enhancing the firm performance. However, several studies has suggested that there is a need for further testing, so the current study will try to investigate empirically to verify the results and to understand the role of e-marketing uses in relationship between technology orientation and firm performance (Mutlu & Sürer, 2015; Narver, Slater, & MacLachlan, 2000).

Moreover, mediating effect of e-marketing adoption in the IT and the Strategy literature, proponents of capability technology integration (Bharadwaj, 2000; Clemons & Row, 1991; Lengnick-Hall, 1992; Powell & Dent-Micallef, 1997; Tippins & Sohi, 2003) also argued that firm capabilities plays a critical role in the relationship between technology-based innovations and competitive advantage. Specifically, they suggest that the relationship between technology, such as e-business adoption and firm performance depends on the technology being driven by the processes, systems and value. However, understanding the expressed and latent needs of the customers, allow firms to adopt e-marketing technologies strategically (i.e., with a clear and planned purpose), which results in firm performance and ultimately the competitive advantage.

2.7 Organizational Factors

Organizational context refers to descriptive measures about the organization such as scope, size, and managerial structure (Tornatzky & Fleischer, 1990). Further, the organizational context refers to “the characteristics and resources of the firms, linking structure between inter-firm communication process, employees, firm resources and the amount of slack resources”. However, in current study, organizational predictors which are OR, TMS and MO has been discussed in relationship with use of e-marketing and firm performance as follows;

2.7.1 Organizational Resources Relationship with Firm Performance

The organizational resources is defined by Barney (1991) as: “firm resources include all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement the strategies that improves its efficiency and effectiveness”. Further explained that OR can become a source of competitive advantage like in the same kind of industry, resources are almost the same and the only advantage a company can attain is first mover advantage as compare to other competitors. However, if the firm is heterogeneous in nature in terms of its resources, then resources must be rare and cannot be copied for long term.

As explained by Kraatz and Zajac (2001), organization resources plays a dynamic role in handling the external threats because resource rich firms perceives less uncertainty in the environment because more organizational resources (like financial reserves, social capital

or culture, human resource, business resources and marketing capabilities) help the firms to work more efficiently for increased performance as compared to poor resource firms.

A study revealed by Kyriakopoulos et al. (2004), there exist a positive and strong relationship between firm culture and organizational performance because organization with greater resources and greater values can help the human resource to work more efficiently and create better working environment for the success of the organization. Previously, in 1994, Marketing Science Institute (MSI) has acknowledge the need for integration of organizational resources as associated with the firm performance by designating inter-disciplinary research which leads to a better appreciative of customer-oriented organizations as a uppermost research significance. Further, it was found that an organizational culture has a significant effect in reaching superior performance (Deshpandé & Farley, 2004).

Besides, most of the studies have used organization resources as a predictor in the context of the SME's and service sector of western countries also few studies has focused on the emerging countries for instance China, India, Indonesia, Singapore and Malaysia (Ahmad, Rahim, et al., 2014; Hatem Osman Aly Salem El-Gohary, 2009; Liang et al., 2010; Padilla-meléndez, 2009; Rahayu & Day, 2015). In spite of that limited research led in the context of Pakistan, particularly, textile sector was ignored by the scholars, where, textile sector of Pakistan is a major contributor in the GDP as compare to other manufacturing sectors. So, to clarify the importance of organization resources towards performance of textile sector in Pakistan, an empirical study is required to verify the results and to understand the role

of organization resources in relationship with performance of textile sector in Pakistan (Liang et al., 2010; Economy Survey Of Pakistan, 2015; Powell & Dent-Micallef, 1997).

2.7.2 Organizational Resources Relationship with Use of E-Marketing

According to Molla and Licker (2005) revealed that the most important perspective of organizational resources i.e. Organization culture plays a vital role in adoption and implementation of any innovation. However, the most important factor in this regard is the resources of the firm, which support e-commerce from all corners of an organization and especially from the strategic apex. Apart from this side, a study conducted by Trainor, Rapp, Skinner and Schillewaert (2011) mentioned that organizational resources, specifically, human resources that is also considered as a second dimension of the e-Marketing ability plays a significant role in creating the value from information and technology adoption and usage. Further identified by the scholars that innovative company employees' will not only opens to implementing the new processes, but also open in finding about the required modifications to improve the process. Additionally, in the context of electronic business that have an open or flexible culture leads to enhanced electronic business performance (Saini & Johnson, 2005).

Though, past studies identified that the organization's resources (like human resource, culture and preferred work practices) are also linked with e-commerce adoption (Grandon & Pearson, 2003). Moreover, DeBerry-Spence and Dadzie (2008) concluded that firms that wish to adopt e-commerce or e-marketing in their organizations must ensure alliance between the culture and infrastructure of the organization. Although, a study by Hameed,

Counsell and Swift (2012) has found weak relationship with IS infrastructure, top management support, IT expertise, resources and organizational size, so therefore, further study is required to examine the relationship in the context of Pakistan textile sector to compare and evaluate the results.

According to previous researches, some of the empirical questions need to answer to understand, whether or not a particular organizational resource can become a source of competitive advantage for instance; is that particular resource valuable, is it imperfectly imitable, is it rare and are there alternates of that resource. For instance; e-marketing adoption is a new technology that needs to be addressed in the textile sector of Pakistan, as very few firms, including large firms and SME's have adopted this technology (Sheikh, Shahzad, & Ishaq, 2016a; Abrar et al., 2008; Haider et al., 2015). Although, several countries in European Unions and also the emerging economies like China, India and Bangladesh have incorporate innovative technologies in their businesses like e-business, e-commerce and e-marketing, the reason is to increase their global reach, to reduce the business costs, to increase market shares and to make their businesses more sustainable and technologically enhanced.

Yet, Pakistan textile industry is at survival stage and facing severe challenges, including high cost of business, lack of adequate resources, electricity crunch and also their access to customers is less as compared to other rivals like India and China. So, in order to get the desired outcomes, current research will see the impact of organizational resources on E-marketing adoption and how this problem will be addressed with the help of e-marketing

technology implementation (Barney, 1991; Fredriksson, 2013; Gilmore et al., 2007; Lal, 2004; Pakistan, 2015; Highlights of Pakistan Economic Survey, 2015).

2.7.3 Top Management Support Relationship with Firm Performance

The extent to which CEOs impact the firm performance is considerably important to scholarly understanding of, how organizations operate; until now, this relation is poorly implicit. Previous empirical studies examined the relationship among CEOs and firm performance used adjustments, though challenging, however suffer from methodological problems, which systematically reduces the relative influence of CEOs on the performance of the firm as contrast to industry and firm effects. However, in current study, it needs to examine to how much variance in firm performance explained by heterogeneity in CEOs of textile industry in Pakistan (Mackey, 2008; Rahim et al., 2015a; Varukolu, 2007).

Several previous studies also claimed that top management is responsible for firm beyond production management. It implies 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-management 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. In line with this statement, Ahmed (1998) made a comparison of highly innovative companies with less innovative companies, top management commitment plays a most significant role in terms of finance and also gives emotional support to its employees, which ultimately impact on the export and internal performance of the firms.

However, previous studies have 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; Hong & Zhu, 2006; Li, 2008; Molla & Licker, 2005; Premkumar & Roberts, 1999; Rahayu & Day, 2015; Wang et al., 2010). But limited studies have empirically examined the impact of top management support on the firm performance, therefore, current study will address this gap through the help of quantitative research (Mackey, 2008; Varukolu, 2007).

Furthermore, most of the studies has used top management support as a predictor in the context of the SME's and service sector of western countries as well as in few emerging countries like China, India, Egypt and Taiwan (Al-qirim, 2007; Duan et al., 2012; El-Gohary, 2012; Li, 2008; Molla & Licker, 2005; Prasad et al., 2001; Premkumar & Roberts, 1999; Wang et al., 2010). But, on the other hand, limited studies have seen in the context of Pakistan where textile sector has been ignored by the researchers as top management participate in almost all the decisions of the firms, secondly, textile sector in Pakistan is

consists of both large and SME's which are mainly owned by the individuals or by families. Thus, to clarify the importance of top management support towards firm performance, further empirical investigation is a major focus for current study (PACRA, 2011; Seyal et al., 2004).

2.7.4 Top Management Support Relationship with Use of E-Marketing

Top management support is the most important variable that shows a key role in the acceptance, diffusion and innovation of technology also explained by DOI theory by Rogers (1995). Moreover, according to (Henderson & Venkatraman, 1993; Powell & Dent-Micallef, 1997; Raji Srinivasan et al., 2002; Wu, Mahajan, & Balasubramanian, 2003), highlighted that for the successful implementation of technology requires significant support from top executives for encouraging to adopt new technology and provides visionary leadership which clearly eloquent the need for the technology across the organization.

Likewise, a study conducted by Haugh and Robson (2005) found 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 within the context of organization. Further examined that the top management factors could be essential for the success of information systems within organizations because top management support is found as a significant predictor of Internet adoption (Fink, 1998; Premkumar & Roberts, 1999; Tan & Teo, 1998; Thong & Yap, 1995).

However, considering the fact, top management in textile sector of Pakistan, normally, hire the professional to deal with information system and top management is normally afraid of adopting such technologies due to lack of awareness and knowledge, that is why, textile sector of Pakistan is lacking behind in the global competition (PACRA, 2011). Hence, in the current study, top management support towards management information system and on the implementation of MIS (particularly e-marketing adoption and usage) problem needs to be addressed in detail.

Further, a study by Ahmad, Rahim, Bakar and Mohamed (2014) clarifies about those companies who have positive management attitude towards the e-marketing or e-commerce 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. Thus, it implies that the success of e-commerce dissemination depends on the support of the management.

While, most of the studies has used top management support as a predictor in the context of SME's and service sector of western and developing countries like China, India, Egypt and Taiwan (Al-qirim, 2007; Duan et al., 2012; El-Gohary, 2012; Li, 2008; Molla & Licker, 2005; Prasad et al., 2001; Premkumar & Roberts, 1999; Wang et al., 2010). But still e-marketing effect has been ignored by the researchers in textile sector of Pakistan. Where, in Pakistan textile industry top management is the sole authority and participate in every decision of the firms, however, to clarify the importance of top management support towards e-marketing adoption, there is a need for further empirical investigation (Overview of the Economy, 2015; PACRA, 2011; Seyal et al., 2004; Pakistan Economy Survey, 2015).

2.7.5 Market Orientation Relationship with Firm Performance

Marketing and management science have argued that superior customer value is instrumental in achieving a sustainable competitive advantage (Rohit Deshpandé & Farley, 2004; Kyriakopoulos et al., 2004; Porter, 2008). In the field of marketing, there are numerous definitions of market orientation (Deshpandé, 1999; Jaworski & Kohli, 1993; Narver & Slater, 1990).

In this research, the definition of Narver and Slater (1990) has included 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 throughout 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 has found sturdy evidence that market-orientation is a crucial strategic determinant of a firm's long-term competitive position e.g., (Homburg & Pflesser, 2000; Jaworski & Kohli, 1993; Narver & Slater, 1990), because it upsurges the customer satisfaction, new products success, and customer loyalty.

MO firms grasp the cultural features that allows them to examine their current capabilities, antedate future capabilities and re-design processes to support new ones. Although, there is an evidence, for instance; (Deshpande, Farley, & Jr, 1993; Narver & Slater, 1990) of the relationship between MO and business performance. Consequently, MO can be a basis of competitive advantage only when, if it is rare in a company (Barney, 1991). With the widespread research on market orientation and its relationship with firm performance, firms are increasingly investing in market orientation because it is a capability that involves information generation within firms through external environment. MO is likely to be a rare, valuable and inimitable capability and should consequently generate competitive advantage and improve firm performance as it involves processes and skills that make it difficult for competitors to copy as suggested by RBV theory (Atuahene-Gima, & Murray, 2004).

Furthermore, the study by Rapp, Schillewaert and Hao (2008) also suggested about efforts towards how different corporate factors impact a firm's-orientation to the market as well as its customers to gain a more deep 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.

Lastly, according to previous studies, overall textile industry working in different regions of the world is based on customer-oriented approach and all kinds of production, whether it is cotton, yarn or fabric, all based on customer and market demand. That is why, the concept of customization prevails in the textile industry. However, several studies have identified that customers mainly from European Union and United States 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.

2.7.6 Market Orientation Relationship with Use of E-Marketing

There is evidence that firm capabilities influence innovation adoption (Hult, Hurley, & Knight, 2004) and MO positively effects innovation adoption, for instance, (Narver et al., 2000), argues that there is a positive relationship between innovation and MO. The current study conceptualizes e-business adoption or e-marketing uses as an innovation. Moreover, Wu et al. (2003) define it as “the use of internet technologies that link customers, suppliers, business partners and employees by adopting at least one of the following activities: (1)

websites that offer sales transactions; (ii) customer service websites; (iii) intranets; (iv) extranets; and (v) IP electronic data interchange”. Previous studies have shown that customer orientation positively affects electronic marketing adoption. Furthermore, Han, Kim and Srivastava (1998) define customer orientation as “the adoption of a continuous, pro-active nature toward meeting customer’s requirements, which is conceptually similar to MO.

However, most of the studies have used market orientation as a predictor in the context of the SME’s and service sector of western countries (Mutlu & Sürer, 2015; Voola et al., 2012) and several studies have also used this variable as a predictor in the context of developing countries like China, India, Egypt and Taiwan (Agarwal, Erramilli, & Dev, 2003; Chen & Lien, 2013; Do Hyung & Dedahanov, 2014; Eid & El-Gohary, 2013; Rahim, Bakar, & Ahmed, 2015b). But limited studies have seen in the context of textile sector in Pakistan. Though, previous studies in Pakistan has focused more on e-commerce or e-government (Haider et al., 2015), but still e-marketing effect has been ignored by the researchers, however, market orientation helps the firms to understand the needs of their buyers through internal and external environment. Therefore, to clarify the importance of market orientation towards e-marketing uses, there is a need for further empirical investigation (PACRA, 2011; Pakistan, 2015; Seyal et al., 2004; Highlights of Pakistan Economic Survey, 2015).

2.7.7 Mediating Effects of E-Marketing Adoption with Organizational Factors and Firm Performance

According to Liang, You and Liu (2010), IT infra-structure and resources are valuable assets of the company which are used to enhance the internal communication, improves product design & quality, effect in reducing design cycle, also lowers down the cost of product development. Thus, the worth of an organization resource can be increased in the existence of other complementary resources because sometime it is slightly difficult for the competitors to copy the complete effect (Bharadwaj, Bharadwaj, & Bendoly, 2007; Bhatt, Grover, & Grover, 2005).

Moreover, there are three major constructs in the RBV mode: firm performance, organizational resources and capabilities. The dependent construct is firm performance that has been measured from financial and operational perspectives. In other words, both financial and operational performances are expected to be enhanced by the proper use of IT (Saraf, Langdon, & Gosain, 2007; Venkatraman & Ramanujam, 1986). As the theory indicates, the major independent construct of the theory is organizational resources that include: all of the assets, capability, organization process, enterprise character, information and knowledge that an enterprise is able to control, give the ruling, allocate the efficiency improving or achieve efficiency strategy (Barney, 1991).

Next, studies have highlighted 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 reveals more depth into the character of organization resources. However, this study has been conducted on the basis of empirical, qualitative and conceptual papers and needs to be tested in the context of Pakistan, particularly in the textile sector of Pakistan to verify the results and to understand the role of organization resources in relationship with firm performance through mediating role of e-marketing uses (Liang et al., 2010).

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 to observe long term performance of the business (Beekhuyzen, Hellens, & Siedle, 2005; Mombourquette, 2008). On the other side, a study by Ahmad et al. (2014) identified that top management is a key factor in adoption of IT and contribute towards use of e-commerce. It is also expected that companies who have positive management attitude toward e-commerce have more tendency to initiate e-commerce activities to accelerate the business performance effectively.

Competitive advantage is aided by the causally 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; Hult, Hurley, & Knight, 2004). For example, innovation has been argued by Wu et al. (2003) to mediate the effects of customer orientation on performance. In line with discussion, it is mentioned

that the capabilities such as market orientation create and shape the firm's e-marketing usage strategy, which enhance the firm performance in terms of more revenue.

2.8 Environmental Factors

Environmental context is the arena in which “a firm conducts its business, its industry, competitors, and dealings with the government” (Tornatzky & Fleischer, 1990). Further, the environmental context includes “the structure of the industry, the presence or absence of technology service providers, and the regulatory environment” (Baker, 2011). Below are the few factors (government support, competitive pressure, pressure from trading partners) that have been highlighted in relationship with firm performance through the use of e-marketing.

2.8.1 Government Support Relationship with Firm Performance

A study by Shaher (2012) found that Pakistan textile industry is mainly affected by the ineffective governmental policies, such as lack of R&D and IT implementation. This implies that IT needs vital attention and development in textile sector of Pakistan to avail the opportunities and get maximum market share with respect to its competitors.

The government must take several corrective and preventive measures to solve numerous problems, for instance; establish R&D department to compete in international market, make technology advancement to give improved product and services, also resolve electricity-crisis confronted by textile industry. In line with discussion, government should concentrate more on the growth and expansion of textile industry by introducing relief on

tax, import and export taxes (Shah et al., 2012). So it implies that government should consider all mentioned issues in order to secure the textile industry of Pakistan for the long term basis.

However, previous studies has used government support as a predictor in the studies related to technology adoption (e.g. Related to innovation, e-business or e-commerce, e-marketing, e-procurement, e-government) based on (Kazungu & Panga, 2015; Tam, 1998; Thatcher et al., 2006) . But very limited studies have investigated the impact of government support on firm performance (Shah et al., 2012), so this is one of the issue which needs to be addressed with the role of government support on textile sector performance in the context of Pakistan.

In a recent study conducted by Zhang et al. (2014) contradicts in its findings that key variables like government subsidies & political connections have an insignificant effect on the performance of the firm. On the other hand, few studies on government support have found a significant and positive relationship with the firm performance (Kang & Park, 2012; Lau & Tong, 2008). However, to see the clear results, there is a need for empirical investigation to see the effect of government support on the firm performance in the textile manufacturing sector of Pakistan.

Thus, all the above discussed factors are causing a direct or indirect effect on performance of textile industry, which needs to be tested with the help of TOE model and RBV theory that at what level government support impacts on the firm performance and how this gap

can be filled with the help of current study theories. Additionally, suggestions will be regulated after the findings on how government can help the textile firms on practical grounds, particularly in improving their performance as research will identify the impact of government support on firm performance.

2.8.2 Government Support Relationship with Use of E-Marketing

Government is reflected as the main factor in the adoption and uses of any innovative technology. Government pushes the firm to adopt and use B2B electronic marketplace in order to operate their marketing-activities and even though governmental intervention in Asian countries has motivated the firms to implement B2B e-business, as it was considered as an important portion of the business environment. Therefore, according to Hu, Wu and Wang (2004) a country's willingness for businesses based on electronic media fundamentally depends on the government backing: promotional activities, governmental grants and also the regulatory values for establishing digital trading environment. But, in order to see the government encouragement for e-marketing usage, an empirical study is required.

Further Hu et al. (2004) suggests that For the underdeveloped countries like China who wants to take the portion of revenues through use of e-commerce and catch-up with the western countries in the new developed economy, it is crucial for the governments to hasten their policy making process and also establish a expectable and reliable legal environment that support e-commerce whatever the jurisdiction in which that particular transaction parties exists. While, the government must apprise their law to adapt progress of electronic-

technology and e-business. However, several countries such as the USA, members of the EU, Australia, Canada, and Singapore already made an attempt to regulate and speed up e-commerce to adjust their legal systems.

The study conducted by Seyal et al. (2004) highlights that at the macro level, governmental agencies must be geared-up to increase efficiency and also promote the technology within firms. In line with this argument, Seyal et al. (2004) illustrate that there is a lack of proper IT infrastructure in Pakistan, which is making them far behind from their regional competitors. An advisory board under the department MOITT also monitors the effective controller of the resource center, particularly in providing the technical support, especially for the textile and SMEs.

Moreover, Seyal et al. (2004) clearly highlights that the influence of government policies and creativities has shown direct as well as indirect motivation to provide information that produces faster technology. For many companies, government has become a source of funding-infrastructure, but to see the role of government in textile sector, there is a need for more investigation.

In contrast to other developing countries, a study has been conducted by Utomo and Dodgson (2001), which highlights that IT diffusion among Indonesian firms have further confirmed that the government can play an effective role as facilitator in providing assistance to firms, which have limited IT resources. However the study also found that the direct intervention of the government can be considered as important in promoting

technological innovation although the degree of influence on firm may vary between countries. However, in few Singapore related studies, researchers Yap, Thong and Raman (1994) found that governmental incentives in the form of economic, financial and technological support have lowered the barrier of IT adoption.

Apart from this side, most of the studies have used government support as a predictor in the context of the SME's and service sector of western countries (Duan et al., 2012) and several studies have also used this variable as a predictor in the context of developing countries like China, India, Thailand, Taiwan, Saudia Arabia, etc. (Al-Hudhaif & Alkubeyyer, 2011; Thatcher et al., 2006; Ueasangkomsate, 2015). But, limited studies have observed in the context of textile sector in Pakistan as previous studies has focused on e-commerce or e-government. In spite of this, e-marketing effect has been overlooked by the researchers, so to clarify the importance of government support towards e-marketing adoption, there is a need for further empirical investigation (Abrar et al., 2008; 2016).

2.8.3 Pressure from Trading Partner Relationship with Firm Performance

Previous studies have shown that trading partners have a strong impact in sharing the information between the firms and this sharing of information postulates a necessary role in increasing the performance of the firm as well as cost effectiveness (Porterfield, 2008).

Moreover, Ahmad, Rahimi, Bakar and Mohamed (2014) mentioned that companies focus on the sales, profitability and global reach to achieve more market shares and competitive advantage. Hence, sometime organization feels lot of pressure from their trading partners

as also suggested by Calis et al. (1999) that few companies have a selection procedure of trading partners for sharing of information and particularly the firms who are involved in imports or exports of the products are more concerned about their trading partners and depends on informal and personal contacts for information. However, it needs to be addressed that how trading partners in textile sector influence firm's performance by supporting them through increased sales, customer satisfaction and also by other performance factors.

A study conducted by Ke and Wei (2007) clearly highlights that when companies decide to share particular information about their business with their trading partners, it left the researcher with few questions, for instance, is this partner reliable and firm must be sure of that the sharing of particular information will not be harmful for them. Furthermore, in an interview, it is stated by the CEO of the company that "trading partners are much larger than us in the market. If we didn't share knowledge with them as they required, they wouldn't lose that much, I think. But it would be very difficult for us to get their products and technical supports. Especially, they might provide our competitors with better trading terms and make it tough for us. So the best choice for us is to listen to them and share what is appropriate to them." However, in the current study, it needs to be investigated that how trading partners are affecting the performance of textile sector of Pakistan and whether sharing of information can help them to increase their performance. The results will definitely contribute to the existing knowledge of the literature.

2.8.4 Pressure from Trading Partner Relationship with Use of E-Marketing

According to Ahmad et al. (2014) proves that the success of the internet initiatives of an organization depends not only on its own effort, but also on the willingness of its trading partners like suppliers, vendors and customers to engage in electronic interactions and transactions. Previous studies has also upheld this statement that firm may uses a technology due to the pressure applied by its trading partners (Kuan & Chau, 2001).

However, in Pakistan, particularly in the textile value chain, each firm is connected with another firm, like spinning is a supplier of weaving division and at the same time finishing and dyeing unit is the buyer of weaving fabric for further processing (ILO, 2014; Morais, 2006; PACRA, 2011). This indicates that these business units are buyer and seller at the same time and act like a trading partner. But still, there is no proper electronic way to communicate with each other or to share the information through websites or electronic manner. All transactions and way of doing business is manual except e-mails (Abrar et al., 2008; 2016). So it needs to explore that why they are still relying on same old techniques and what is the role of trading partner in influencing the firms to adopt technology for instance; e-commerce, e-business or e-marketing because these technologies can help them in daily electronic business transactions, more reliability and security of information, cost effectiveness, export business enhancement by sharing the market trends and disclosure of data through intranet services. (Abrar et al., 2008; Calis et al., 1999; Iddris & Ibrahim, 2015; Ke & Wei, 2007; Laura Lucia-Palacios, Victoria Bordonaba-Juste, Yolanda Polo-Redondo, 2013; Lee et al., 2005; Oliveira & Martins, 2011; Porterfield, 2008; Rahayu & Day, 2015).

2.8.5 Competitive Pressure Relationship with Firm Performance

The study held by Amoako-Gyampah and Acquah (2008) on competitive strategy does not impact directly on the firm performance, it does so in-directly through the quality. So it needs to investigate that how competitive pressure effect directly on the firm performance.

However, there are few studies that have checked the effect of competitive pressure on firm performance. Previous studies are mostly related to competitive advantage and competitive strategy effect on firm performance, for instance; (Ma, 2000; Newbert, 2008; Ortega, 2010; Saeidi et al., 2014). So, in order to check the direct effect of competitive pressure on firm performance, an empirical testing is required through the help of current study. The interpretation and study will definitely add a positive contribution to the current knowledge of the study with the help of DOI, RBV theory and TOE framework as well.

2.8.6 Competitive Pressure Relationship with Use of E-Marketing

In a study by Alzougool and Kurnia (2008) indicated that if there is a dominant players in the market, who are enjoying a lot of power, only then, they can force other weaker players to follow and to make industry standard. Therefore, it implies that to maintain the position of competitiveness, one has to adopt the technology to grab maximum market shares both at local & international level and such activity increase the confidence level of the customers and help the company to increase their sales to pay back the investment in short span of time (Gupta, Seetharaman, & Raj, 2013; Kuan & Chau, 2001; Lal, 2002; Shrivastava, 1995).

According to Rahim et al. (2015) illuminated that various adoption reasons have been proposed in the research of technology adoption; while, among the most popular reason is the competitive advantage that represents the company's wish to gain and sustain competitive advantage; efficiency and effectiveness. Previously, Chengalur-Smith and Duchessi, (1999) found that enthusiasm for retaining the client server technology in firms consist of competition, efficiency as well as operations are more business driven rather technical in the nature.

In aspect of Ahmad et al. (2014) illustrates that relationships among industrial players within the same sector also influence on the overall structure of the industry. However, these relationships determine the degree of competition within the industry and plays a major role in the adoption of technology. A company may also feel pressure, when it observes that other companies in the industry are adopting the latest technology and therefore feels the need to adopt the technology to remain competitive (Kuan & Chau, 2001).

2.8.7 Mediating Effects of E-Marketing Adoption with Environmental Factors and Firm Performance

Government incentives and support were found to be significant and influencing e-marketing use in the firms because greater the government incentives as perceived by an organization, the higher is the likely-hood of an organization to adopt E-Marketing in order to increase firm performance. Moreover, Pakistani firms consider governmental involvement as an important factor for e-commerce use. The findings also support the prior studies on government support for information & technology by (Tan & Teo, 1998, 2000;

Yap et al., 1994), however, results are inconsistent with (Seyal & Rahman, 2003). Therefore, after assessing the need to see the impact of government support in the context of textile industry of Pakistan regarding technology adoption, there is a need for further empirical investigation.

Furthermore, changes in environment might stimulus the businesses to pursue for new technologies. Because, in an industry where the competition is very high, there is a need for firms to get progress in technology and to use the technology urgently to attain and sustainable competitive advantage. While, competition is the environmental variable that influence the businesses strategy, however, it has found to be a most significant persuader that governs the level of technology adoption and usage in an organization (Premkumar, 2003; Varukolu, 2007). Based on previous studies such as (Grover, 1993; Premkumar & Ramamurthy, 1995), the use of advance technologies in the organizations to produce better products with the lowest prices is gaining a competitive edge.

The study by Chwelos, Benbasat and Dexter (2001) conducted on the e-commerce adoption found that external pressures were significant determinants also trading partners plays an essential role in generating the pressure in order to adopt the latest technology in the business transactions, interaction between the customers and to maintain the close relationship.

2.9 Use of E-Marketing (Mediation) Relationship with Firm Performance (DV)

A study conducted by Mzee, Ogwenso and Irene (2015) reveals that organizations who use the E-Marketing in their businesses found that implementation of E-Marketing is not an expenditure. It will help to communicate with the customers locally and globally. In line, the study of Rahim et al. (2015) highlights that e-marketing technology uses differs from business-to-business, in spite of extensive acceptance of the internet in business environments. Other than that e-marketing is a recent technology that has established considerable attention in the industry. Nevertheless, Chen and Lien (2013) claimed that in spite of the rapid growth of new technologies, leading organizations still use them at a sluggish rate. The study of El-Gohary (2012) specified that the use of e-marketing technology is relatively a new concept, particularly for organizations working in the developing countries, who have inadequate resources and tough competition. Consequently, businesses might not afford to make un-wise investments or incorrect decisions, which caused poor up-take of e-marketing technology between firms and influence the marketing performance of the firm.

Furthermore Rahayu and Day (2015) confirmed that e-commerce has changed many things in the business; it is not only has changed the way they sell, purchase or deal with their customers and suppliers, but it has also changed the business perspective from “production excellence” to “customer intimacy”. Despite of great attention by government, the adoption of electronic commerce is still behind in developing countries. Because, in developing countries, the role of firms become more meaningful, especially in respect of reducing poverty, unemployment, and cost of operating a business and investment risks as well.

According to Eid and El-Gohary (2013) found that there is a positive association among e-marketing and the marketing activities. Moreover, few studies found positive association among the e-business diffusion and firm performance. 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. Moreover, the results clearly emphasized that presales marketing activities and aftersales marketing activities have a catalytic impact on the business marketing success.

Another study revealed by Ahmad et al. (2014), the most significant expansion trends in the last decade are the large use of the Internet as a platform for steering business activities and new prospects for transactions due to the potential profits to companies, similar to this study Barwise and Farley (2005) have claimed that less empirical studies about the e-marketing have been published which actually influence on marketing-practice and performance. Moreover, Barwise and Farley (2005) found that there is seen to be an increase in the diffusion of electronic marketing.

The importance of e-electronic way of doing business was further examined by Voola et al. (2012), they investigate that accepting the actual adoption of technological innovations,

for instance; e-marketing, is perhaps one of the important challenge fronting by organizations. The studies shows that the relationship among firm capabilities and firm performance is mediated by the effects of the adopted innovation (e.g., e-marketing). Similarly, a study by Smits and Mogos (2013) found that the use of social media (E-Marketing Tool) enhances business capabilities and business performance.

According to Voola et al. (2012) clearly highlights that performance, effectiveness has a direct and positive relation with innovation adoption. In line with the statement, researcher has ascertained on the basis of considerable evidence that electronic business adoption can provide a number of strategic benefits to the firms for instance, it helps in the reduction of supply chain cost, develop new markets, increase distribution efficiency and to interact with buyers more closely in developing long term relationship. Moreover empirical evidences have been found stating that EBA is positively co-related to firm performance. While, Wu et al. (2003) also discovered a positive link between EBA and four methods of firm performance: sales performance, customer efficiency, relationship development and satisfaction. It implies that e-business or e-marketing innovativeness directly influence customer relationship performance and growth of sales.

As revealed by Taleghani et al. (2013), companies are focusing more on marketing activities to enhance their export performance. In perception to increase their export performance, firms are adopting e-marketing tools and using them to have a competitive advantage over other rivals, cost reduction of distribution, increase supply chain efficiency,

close interaction with buyers and to perform market research for product development purpose to find new customers and also in maintaining the existing one as well.

However, there is a need to conduct empirical studies in developing countries' business environments, particularly in Pakistan textile sector to understand the e-marketing adoption strategies and how they affect business performance. This current study is one of the very early studies devoted to investigate the practice of e-marketing adoption strategies and its effect on international business performance in Pakistan. There is a severe competition between international companies who are really interested in e-business in general and providing a reasonable quality of e-marketing activities. (Akroush, Nuseir, Asoub, & Mahadin, 2009).

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 e-marketing adoption and firm performance. Secondly, scholars have traditionally focused on western organizations. Even though e-marketing practices increases the business performance, especially, needed by Pakistani organizations, particularly in the textile sector of Pakistan, which has a major contribution in GDP as compare to other

industries of Pakistan. Additionally, the current study has conducted in Asian countries, particularly in the context of Pakistan as opposed to western context, also recommended by (Lucia-Palacios et al., 2013; Voola et al., 2012)

2.9.1 Moderating Role of Technology Opportunism in Relationship with E-Marketing Adoption

A study by Voola et al. (2012) clearly indicated that only IT or e-marketing adoption does not enhance firm performance or create value for the firm. Firms have to integrate resources into business activities so as to develop firm capabilities. In addition to that research conducted by Lucia-Palacios, Bordonaba-Juste, Polo-Redondo and Grünhagen (2014) confirmed that technological opportunism capabilities help firms to increase the assimilation of different business processes and create a strong relationship between technology adoption and business performance. Managers should note that only adoption of a technology does not increase firm competitive advantages. Also, internet-based technologies have the potential to generate high rewards, but they also represent a risky decision that may create organizational changes. However, managers should encourage the diffusion of ITs among employees and partners and integrate them into their business processes.

Technologically opportunistic firms are proactive in their search for innovations. Some authors examine this construct as the antecedent of the adoption and of the use of new technologies in different contexts. In their seminal work, Srinivasan et al. (2002) analyze the use of e-business and several studies have examined this construct as an antecedent of

business-to-business market firms (Klinger, 2004; Mishra & Agarwal, 2010). However, Lopperi (2006) focus on wireless e-business, besides, firms that are more versus less technologically opportunistic are more likely to adopt a greater range of ITs and use them more intensively in all their business processes. All of the previous research reaches the same conclusion: the degree of technological opportunism is associated with adopting and implementing new technologies.

A study conducted by Lucia-Palacios et al. (2013) found technological opportunism as a predictor of performance. In line with discussion, Chen and Lien (2013) recommends technological opportunism as an originator of performance, which is consistent with the idea that capabilities create competencies to address changing environments, however, findings revealed that firms systematically analyze the market and look for new opportunities and respond to those opportunities to perform better. Hence, study results should encourage managers to invest resources in being technologically opportunistic and can impact on the performance directly.

Additionally, firms are going to value positively those firms that sense and respond to technological changes (Chandy & Tellis, 2000). Strong technologically opportunistic organizations might see the potential to collaborate with other stakeholders such as suppliers, customers and partners. In the end, this increases the customer value, improvement in cash flows level and firm performance (Chen & Lien, 2013; Sarkees, 2011; Voola et al., 2012).

A study by Lucia-Palacios et al. (2014) confirmed that competitive advantage depends on the firm's capability to adopt and integrate new technologies in a strategic and timely manner. Previous research has confirmed the importance of mediators such as innovation or e-business adoption with respect to the capability–performance relationship, this relationship has also been explained with the help of resource based view theory that companies accept innovation from the external environment, then utilize tangible and intangible resources through internal capabilities to achieve desired performance and competitive advantage (Foley & Fahy, 2009; Hult et al., 2004; Voola et al., 2012).

Although researchers report on the direct effect of technological opportunism on innovation and firm performance (Sarkees, 2011; Srinivasan et al., 2002). Where, limited studies has analyzed the moderating effect of technological opportunism particularly none has seen the moderating effect of technological opportunism between e-marketing uses and firm performance. 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, influences firm performance and also technological opportunism directly affect the firm performance as well (Voola et al., 2012; Sheikh, Shahzad, & Kulshak, 2017).

2.10 Underpinning Theory and Model

In the current study, researchers will use one underpinning theory and one supporting theory, additionally, one model to explain the framework;

1. RBV (Resource based-view) theory (Birger Wernerfelt, 1984)
2. DOI (Diffusion of innovation) theory (Rogers, 1995)
3. TOE (Technology-organization-environment) model
(Tornatzky & Fleischer, 1990)

2.10.1 RBV (Resource based-view) Theory

The RBV theory is one of the widely known theory related to firm performance. The foundation of the RBV can be traced back to earlier works that emphasized on the significance of resources in enhancing firm performance (Penrose, 1959). Following the work of Wernerfelt (1984); Chandler (1990) and Barney (1991), the RBV became an influential theory within the field of strategic management. The RBV postulates that the basis for competitive advantage of a firm depends on the firm's ability to utilize the available bundle of valuable intangible and tangible resources (Amit & Schoemaker, 1993; Barney, 1991; Dierickx & Cool, 1989; Mahoney & Pandian, 1992; Maijoor & Witteloostuijn, 1996; Rumelt, 1984; Wernerfelt, 1984). Drawing on previous research in RBV, this current study aims at illustrating the interrelationships between RBV, organizational innovation and performance. Specifically, here the focus will be on those aspects of RBV that critically determine the firm's capacity to innovate.

It is argued that these resources must be valuable, rare, inimitable and non-substitutable (VRIN) resources (Barney, 1991). To be specific, the RBV emerged as the theory that explains firm performance, which is driven by resources that are heterogeneous rather than market power. According to Penrose (1959), business firms are bundle of resources that

give the firm a competitive advantage. Competitive advantage is defined as the firm's ability to adopt strategies that are value-creative and not simultaneously used by competitors or potential entrants (Barney, 1991).

The RBV originated from the work of Penrose (1959) which describes a firm as a combination of resources. Later, Barney (1991) provides a better description of RBV, defining a firm's resources as assets, capabilities, procedures, characteristics and knowledge that can be used by the firm to formulate and implement competitive strategies. Firm resources are assets or entities that can be used by the firm strategically to maintain competitive advantage (Daft, 2009). This is in line with Peteraf (1993), conditions underlying sustained competitive advantage include superior resources (heterogeneity within an industry), being retroactive to competition, imperfect resource mobility and being proactive to competition.

There are two fundamental assertions of the RBV. Firstly, assets, capabilities, procedures, characteristics and knowledge possessed by the firm are different from its competitor (heterogeneity). Secondly, the difference may be for a long time, i.e., immobility of the resources is sustained for a long time (Barney, 1991). Heterogeneity is needed for a firm to achieve competitive advantage. The resources possessed must not be owned by its competitors at least for some period. Immobility of resources refers to the difficulty faced by the competitors in copying the strategy of the firm that possesses the resources.

Barney (1991) gives a more detailed classification of a firm's resources, i.e. physical, human and organizational resources. Physical resources are tangible resources of the firm while human and organizational resources are intangible resources of the firm. Human resources are person-specific, which include experience, training, judgment, skills and execution abilities of individuals within the firm. Organizational resources, on the other hand, are firm-specific, which include reporting structure, environmental scanning methods, cultural strength and relationships among members of the firm and its environment (Barney, 1991).

According to Kostopoulos (2002), the acceptance of the RBV of the firm has changed our emphasis on the black box of the organization. Theoretically, the essential idea of RBV reports the important question of why organizations are different from each other and how these organizations can sustain and achieve competitive advantage by using their important resources. Moreover, Wernerfelt (1984) recommended that assessing the firms on the basis of their resources might lead to insights that varies from traditional aspects.

Barney (1991) presented a more comprehensive and strong framework to recognize the required features of organization resources to produce sustainable competitive advantage. These features includes whether resources are: "valuable (in the sense that they exploit opportunities and/or neutralize threats in a firm's environment), rare among a firm's current and potential competitors, inimitable, and non-substitutable".

Over the last decade, most of the strategy studies has highlighted the resources which are internal to the organization as the principal driver of organization profitability and strategic competitive advantage. This evolution in managerial and academic attention from an Industrial Organization (IO) economic view concerning a resource based view strategy has ensued for number of reasons as followed.

First, the rate of change in terms of new technology, new products and shifts in customer priorities and preferences has enlarged affectedly. Noticeably, a static portrait of a changing industry is not an satisfactory means for formulating the strategies in an progressively dynamic environment (Bettis & Hitt, 1995).

Secondly, traditional boundaries of the industry are getting blur as several industries overlap with each other particularly the industry related to information technology (Bettis & Hitt, 1995; Hamel & Prahalad, 1994).

Finally, the rate of change in the industry has ultimately increased the pressure on many organizations to react more rapidly as with the passage of time it has been observed that competitive pressure also increases (Stalk & Hout, 1990). All these number of reasons recommends that organizations may see their internal environment to find several strategic opportunities, consequently, the firms must realize, reform and reframe about their perception about the industry and also they must define their competitors to survive in the industry.

In this manner, each organization could be hypothesized as an exclusive bundle of intangible and tangible capabilities and resources (Wernerfelt, 1984). Resources, which are the basic unit of analysis for Resource-based View theory, however, these resources can be defined as “those assets that are tied semi-permanently to the firm” (Maijoor & Witteloostuijii, 1996; Wernerfelt, 1984). It includes physical, financial, commercial, technological, organizational and human assets used by organizations to create, produce, and sell the products and required services to its consumers (Barney, 1991). Scholars classify these resources as tangible “physical or financial” and intangible which are, “TO, RA, MO, TMS, OR, GS, CP, TP, UEM and TOP”.

Example of resources and capability: if the Intel Corporation entirely goes in liquidation situation, then its microprocessor patents right (which is a resource) can continues to exist under new ownership but on the other side its skills in designing a new generation of microprocessor (a capability) might be finished. Apart from this side, the other feature which distinguish a resource from the capability is consider as the main objective of a capability to enhance the productivity, efficiency and effectiveness of the resources that an organization owns for instance e-marketing tools in order to accomplish its targets (Amit & Schoemaker, 1993). Besides, capabilities and resources are also known as a product of strategic choices and consequently the commitments regarding resources made by the organization and directed by an economic wisdom and by purposes of organization performance and effectiveness (Conner, 1991).

Traditionally, in management literature, the most essential research questions is to know about the relationship among innovation and the characteristics of firm structure (for instance., specialization, formalization, centralization,) and the industrial environment. This traditional aspect suppose that variation in the organization innovation activities are basically clarified by industry and the characteristic of organizational structure (Damanpour, 1991; Duncan, 1976; Kimberly & Evanisko, 1981; Lyles & Schwenk, 1992). Comparatively, more behavioral oriented research stream and most importantly evolutionary economics (Nelson & Sidney, 1982), have deliberate innovation accomplishments and also performance not only in relationship of organizational structure or industry characteristics also in term of capabilities and resources (Dosi, 1988).

In line with several reasoning's, an increasing body of literature that holds the resource-based-view of the organization (Brown & Eisenhardt, 1997; Henderson & Cockburn, 1994; Leonard-Barton, 1995) suggests new understandings to innovation management. According to this important perspective, the existence of various organizational capabilities and resources positively affect the outcomes of the innovation (i.e. use of e-marketing) process and, thus, could be used to extend the results gained by past literature on the organizational capacity to innovate.

Technological oriented and market oriented firms (for instance; new product development, latest technology usage in manufacturing facilities, enhanced IT systems, customer and competitor oriented) have found positively affected the innovation (i.e. use of e-marketing) (Gatignon & Xuereb, 1997; Mitchell & Zmud, 1999). Therefore, based on the concept of

RBV theory of the firms, most of the organizations are capable to produce knowledge within their premises, but on the other side they must open themselves to new ideas which are coming from the external environment of the organization to avoid rigidity of encouraging innovative behavior, and also to check technology development against those of competitor's (Leonard-Barton, 1995). From the resource-based view perspective, innovation does not come simply from scanning the external environment for market opportunities, but from looking inside and build on the resource endowment and core competencies of the organization.

The RBV literature suggests that a firm should strive to innovate not only better than competitors, but also one step before the competition. By developing dynamic capabilities, for example, a firm is able to adapt to changing industry conditions, learn and exploit new knowledge and articulate an innovative response to previously nonexistent market demand.

2.10.1.1 RBV Relationship with E-Marketing Uses and Firm Performance

According to Liang et al. (2010), Information technology (IT) is a key driver of many organizational evolution and technological innovation. Understanding, whether and how information technology (IT) has effected firm performance is a significant research problem, as it permit the managers to understand the value of IT investments (for instance, use of e-marketing). Several studies in Information systems have highlighted the results about the association among IT and firm performance. Many theories have been suggested to explain the wide-spread of IT, such as the transaction cost theory (Subramani, 2004) and

resource-based view (RBV), media richness theory (Banker, Bardhan, & Asdemir, 2006; Lai et al., 2008), or social exchange theory (Goo, Kishore, Nam, Rao, & Song, 2007).

Moreover, these theories have different relevant research domains. For instance, the transaction cost theory has been used extensively to illustrate IT out-sourcing and other than that media richness theory was used to clarify the selection of a specific software tool. Among all these theories, the most prominent theory adopted to understand the association among IT and organization performance is the RBV suggested by (Wernerfelt, 1984). The core statement of RBV is that organization performance can be found by the resources it owns. The organization with more unique and valuable resources is likely to produce sustainable competitive advantage. To this view, information technology (IT) is known as a valuable organization resource which enhances the organization capabilities and eventually leads to higher performance of the firm. Furthermore, RBV “has emerged as a key perspective guiding inquiry into the determinants of organizational performance”.

Though, the use of RBV theory in evaluating the contribution of information technology (IT) to organization performance gives a better impact and also number of papers linked to this methodology got published in several journals but unfortunately findings remained inconclusive (Mitra & Chaya, 1996; Ray et al., 2005; Wang et al., 2006; Weill, 1992). In additionally, the weak association among IT investments and financial performance of the organization lead the researchers to test the influence of IT on organization performance (Ravichandran, Liu, Han, & Hasan, 2009). With the help of these findings, it is valuable to do a primary research study that combines past literature empirical findings and also test

potential problems in this area. Moreover, the researcher in current study has established a theoretical framework to observe both the direct effect of organizational, technological and environmental factors on firm performance and its indirect effect through the use of e-marketing (innovative technology). Current study findings will give valuable insights into the influence of information technology on organization performance and the useful strategies for future research.

2.10.2 Models of IT Adoption

There are number of theories that has been used in IS research (Wade, 2009), but current study will use the theories about technology adoption and its usage to increase firm performance. The most of the theories that has been used in adoption and use of technology are the “technology acceptance model (TAM)” (Davis, Bagozzi, & Warshaw, 1989; Davis, 1986, 1989), “theory of planned behavior (TPB)” (Ajzen, 1985; Ajzen, 1991), “theory of reasoned action (TRB)” (Fishbein & Ajzen, 1975), “Unified theory of acceptance and use of technology (UTAUT)” (Venkatesh et al., 2003), “diffusion of innovation (DOI)” (Rogers, 1995), and the “Technology-Organization-Environment (TOE)” framework (Tornatzky & Fleischer, 1990).

The current study will use the DOI theory because it operates at the firm level with different stages of innovation adoption and on the other hand will use TOE framework Model which explains technological, organizational and environmental context in a structured form, however, DOI theory and TOE model of technology acceptance and usage are the specified ones that operates at the firm level. On the other side, theories like TAM, TPB and UTAUT

mostly linked at the individual perspectives. In the context of current study, TOE framework consistent with DOI theory is applicable on the technological, organizational as well as on environmental factors that leads to e-marketing uses to enhance firm performance in terms of market growth, customer loyalty and financial performance. However, TOE framework and DOI theories has normally been used for technology or innovation adoption and usage purpose, but in order to see the ultimate result that is firm performance of textile manufacturing sector, however the underpinning theory of the current study is RBV (resource based-view) theory (Birger Wernerfelt, 1984). RBV discusses about those aspects that analytically determine the firm's resources and capabilities to create innovation in the process to achieve the competitive advantage in the industry.

Further, research framework has been properly settled down on the basis of theories to avoid any ambiguity during the research. All variables have been justified and properly linked up according to RBV, DOI theories and TOE model.

2.10.3 DOI (Diffusion of Innovation Rogers, 1995)

The adoption and diffusion of technologies are considered as one of the major aspects in the IS studies. A widely used definition of innovation is "an idea, practice, or object that is perceived as new by an individual or other unit of adoption", while diffusion is "the process by which an innovation spreads" (Rogers, 1983). Later, he defined the diffusion of innovation as "the process by which an innovation (use of e-marketing) is communicated through certain channels over time among the members of a social system" (Rogers, 1995).

The definition explains that when a new technology or innovation (use of e-marketing) got discovered, then, the individuals or organizations begin to feel its benefits because they will be interested to adopt and want to be the early adopters. Furthermore, when the social system observes the advantages of the technology from the innovators or early adopters, they are encouraged to adopt and use the technology. Besides, researchers define the adoption as physically gets on the technical innovation and reliability to use it with the assuredly being on the decision adopt (Aiken, Bacharach, & French, 1980; Evan & Black, 1967; Fichman & Kemerer, 1993).

Adoption is defined as “the first time use of idea, product, technology, or program and accepts it”; meanwhile, innovativeness is “the degree to which an individual is relatively earlier in the adoption of new idea than the other members of his social system” (Rogers, 1995). The concept of diffusion is often related with the efforts to extend the innovation by good listeners by using the communication channels, although adoption is more associated with the decision to agree and use the innovation for instance E-Marketing adoption and usage (Bøving & Bødker, 2003; Rogers, 1995; Schon, 1971). In specific, the adoption of technology is defined as “using this technology to sustain business” (Thong & Yap, 1995), and according to (Bøving & Bødker, 2003), technology ‘adoption’ means the ‘use of innovations’ as planned by the designer.

The famous diffusion theory, which has been widely used in the studies of technology adoption is DOI by (Rogers, 1962, 1983, 1995, 2003). The work on this theory was started in 1950 when Rogers saw his father who was a farmer had resisted to use the hybrid seed

corn. Based on the situation, he began to study the factors which affect the adoption or rejection of a new technology until he published the first edition of his book on Diffusion of Innovation in 1962.

Current study has employed DOI theory because DOI is a theory of why, how, and at what rate new technology and ideas spreading through the cultures by operating at both firm and individual level. Moreover, DOI theory perceives innovations as actually being communicated with the help of certain channels by time to time and with-in a particular social system (Rogers, 1995). The focus of this theory is to help organizations and individuals to decide whether to adopt or reject a new innovation and to estimate how it would take to accept and use a new technology. In reality, the theory has been used to clarify and evaluate a wide range of IT adoption such as the adoption of Internet or E-Marketing (Prammanee, 2003), database machine (Hoffer & Alexander, 1992), software engineering techniques (Rodger, Pendharkar, & Bhatt, 1996), and IT in general (Moore & Benbasat, 1991).

Likewise in current study, technology (i.e. E-Marketing) has been adopted by firms in order to have efficiency in their system and process to have competitive advantage over other firms and to satisfy the customers (market orientation) and trading partners from all aspects. Thus it has been observed that the particular portion of the population which adopts an innovation is approximately normally distributed over time (Rogers, 1995). This implies that people working within the organization has different reaction when top management supports and diffuse the technology within the system. It needs proper organization

support, culture and resources to make the organization accept this change of technology within their system and utilize it to make their work more efficient to achieve companies' objectives that will create a relative advantage for the firm in technology adoption as compare to other competitors.

In line with this thought, further bifurcating the normal-distribution into number of segments direct towards the segregation of individuals (Top management and employees in current study) into below five categories of individuals innovative-ness that ranges from earliest to latest adopters: 1) innovators, 2) early adopters, 3) early majority, 4) late majority, 5) laggards (Rogers, 1995). The innovation process in the organizations are much complex because it normally includes a number of individuals, possibly including both supporters and challengers of the new idea or technology and each of them plays an essential role in the decision for innovation.

The theory has four main elements which are: (1) the innovation (2) communication channels (3) time and (4) social-system (Rogers, 1995). These four components explains the process of technology adoption as found by organizations, decision-makers, or individuals.

(1) The Innovation denotes to a new product, idea or technology that seems as new to organizations or individuals. The perceived innovation of the ideas, products, or technology for the individuals give a reaction to a particular person to adopt it.

(2) A communication channel stands as a tool to transfer a message regarding innovativeness of the idea, products, or technology from one individual to another. Rogers (1995) defines the “communication” as the process by which individual discovers, constructs, and allocates from one to another in order to perceive a communication understanding.

(3) Time as an important element in the theory, and it consists of three reasons: (a) the innovation decision process through which an individual receives the knowledge about the innovation, which helps to decide about adoption and rejection of particular technology, (b) the innovativeness refers to relative time (lateness/earliness), the individuals or groups adopts the innovation comparatively with other individual or group, (c) the degree of adoption to the innovation measures the number of persons from a set of individuals to decide about adoption of innovation in a particular time span.

(4) Social-system that refers to a set of inter-related units, which are engaged in solving the problem in order to accomplish a common goal. However, the units of the social-system can be individuals, group, organization, and/or subsystems.

Furthermore, Rogers (1995) also implies that “the adoption of innovation is voluntary to an individual who makes a decision to adopt or reject the innovation in the social system”. To decide about adoption of innovation, there are five different phases which happens to be the members of the social system. Rogers (1995) explains these five stages as the Innovation Decision Process Model (IDPM).

1st Phase: Knowledge - at this stage, individuals have opportunity to know about the innovation itself from relative, reading, media, and so on. Aggarwal, Cha, and Wilemon (1998) defined knowledge as “a person becomes aware of an innovation, and has some idea of how it functions, through information channel”.

2nd Phase: Persuasion - the effect of the behavioral attitude for the individuals to adopt the innovation by members of the social system.

3rd phase: Decision - at this stage, individuals begin the behavior that leads to adopt or reject the innovation. The individual in this phase decides to use or reject the innovation.

4th Phase: Implementation - at this stage, individuals begin using innovation in a real life. Individuals in this phase are considered an adopter on the innovation.

5th Phase: Confirmation - at this stage, individuals begin evaluating the outcomes of his/her decision to adopt the innovation. In this phase individuals make a confirmation to continue use or stop after he/she use the innovation.

The five phases explain in the previous paragraphs, however, do not necessarily occur as step by step, in fact some of them could be ignored (Rogers & Shoemaker, 1971).

However, not every innovation is desirable by the community, and not every innovation will be adopted. Hence, Rogers (1995) presents the innovation characteristics (relative

advantage, compatibility, complexity and observability) which influence individuals' decision-making towards the innovation.

Here in this study, individuals are the company top management or marketing managers working in particular textile industry of Pakistan because only these people can accept or reject the new technology according to their work requirement, pressure from trading partners, competitive pressure, pressure from buyers, government pressure, technology opportunity or any relative advantage after adopting the particular technology.

The Classification of Adopters According to Time is one of the most important elements in the DOI process is the time of adoption. Adopter's classification of innovation according to the time is identified when the individuals adopt the innovation (earliness/ lateness) in the social system compared with other members in the same system, which follows an 'S' shape curve. Within time element the measurement of the diffusion of innovation among individuals or organizations can simply appear. The growth begins slowly until it is used by the majority. Consequently, a more rapid rate of adoption takes place after majority of the users use it which means less time is spent to know about the innovation and fast in making decision to adopt the innovation.

Based on DOI theory at firm level (Rogers, 1995), innovativeness is related to such independent variables as individual (leader) characteristics which is top management attributes and support for technology, internal organizational structural characteristics which is organization culture, infrastructure and resources to support this technology

adoption and usage, and external characteristics of the organization which are competitive pressure, government support, trading partners pressure to adopt new technology in order to maintain the position in the industry to achieve maximum growth.

Further explanation of these terms are; (a) Individual characteristics describes the leader attitude toward change. (b) Internal characteristics of organizational structure includes observations, according to Rogers (1995) whereby: “centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals”; “complexity is the degree to which an organization’s members possess a relatively high level of knowledge and expertise”; “formalization is the degree to which an organization emphasizes its members’ following rules and procedures”; “interconnectedness is the degree to which the units in a social system are linked by interpersonal networks”; “organizational slack is the degree to which uncommitted resources are available to an organization”; “size is the number of employees of the organization”. (c) External characteristics of organizational refers to system openness.

These DOI theory together with the Technology-Organizational-Environment (TOE) framework is highly pertinent in predicting the behavior of adoption in the firm by considering the new technology. Other less common studied theories applied include Network Theory, Institutional Theory, Contingency Theory, and Theory of Planned Behavior. In addition, rare studies deploy multiple theories to explain the scenario (Mohamad et al., 2009).

Table 2.1
Studies based on DOI Theory (Rogers 1995)

IT Adoption	Author(s)
Material requirements planning (MRP)	(Cooper & Zmud, 1990)
IS adoption (uses at least one major software application: accounting, inventory control, sales, purchasing, personnel, and payroll, CAD/CAM, EDI, MRP), and extent of IS (number of personal computers and the number of software application)	(Thong, 1999)
Internet	(Eder & Igarria, 2001)
Website	(Beatty et al., 2001)
Enterprise resource planning (ERP)	(Bradford & Florin, 2003)
E-procurement	(Li, 2008)
E-business	(Zhu, Kraemer, & Xu, 2006)

2.10.4 TOE Model (Technology-Organization-Environment)

The TOE framework was established in 1990 by (Tornatzky & Fleischer, 1990). They identified three major phases of an organization setting that effects the process by which it adopt and implement a technological innovation: technological factors, organizational factors, and environmental factors (Figure 2.1). (a) Technological factors explains both the external and internal technologies related to the organization. This contains current practices and equipment's which are internal to the organization (Hedberg, Nystrom, & Starbuck, 1976), as well as the group of obtainable technologies external to the organization (Hage, 1980; Khandwalla, 1970). (b) Organizational context/factors denotes to descriptive measures about the firms such as size, scope and managerial structure. (c) Environmental context/factors is the ground in which an organization conducts its business, its competitors, industry and dealing with the government (Tornatzky & Fleischer, 1990).

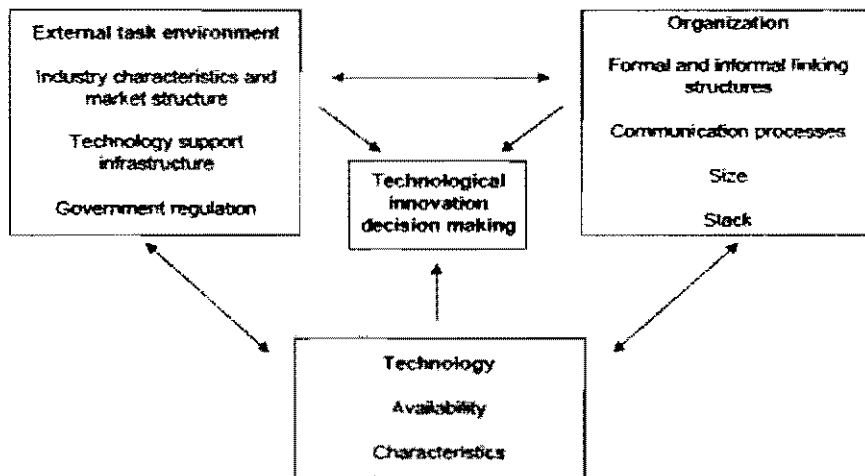


Figure 2: Technology, organization, and environment framework (Tornatzky and Fleischer 1990)

Figure 2.1
Technology-organization-environment (TOE) framework

The “TOE framework” as originally presented and later adapted in information technology adoption studies, provides a valuable analytical framework which is used for explaining the assimilation and adoption of various types of IT innovations. Moreover, the TOE framework was a solid theoretical source, based on empirical support and the potential of applications to IS innovation areas, however particular factors recognized within the three contexts may vary across diverse studies.

TOE framework is dependable on the DOI theory, in which Rogers (1995) focused on the individual features, and also internal and external features of the firms as important drivers for organization innovativeness. These are same like technology and organization context of the TOE framework, besides, the TOE framework also comprises of significant components of environment context. Although, the environmental context demonstrates both opportunities and for technological innovation similarly, government support, trading

partners and competitive pressure, which helps the firms to adopt technology in order to improve their internal process so to communicate with their trading partners and also to compete in the industry in order to ensure market growth, customer loyalty, competitive advantage in terms of increased sales in both local and global level. The TOE framework makes Rogers' innovation diffusion theory better able to explain "intra firm innovation diffusion" (Hsu et al. 2006). Therefore, the next section examines the literature that adopted.

2.10.4.1 Empirical literature of the TOE framework

After thoroughly analyze the TOE framework, now present and complete description of studies that draw on this theory. Following tables will further demonstrate;

2.10.4.2 Studies that Used only the TOE Framework

Most of the studies used the TOE framework to recognize different IT adoptions, such as: electronic data interchange (EDI) (Kuan & Chau, 2001) open systems (Chau & Tam, 1997) web site (Oliveira & Martins, 2011) e-commerce (Liang et al., 2010); enterprise resource planning (ERP) (Pan & Jang, 2008); business to business (B2B) e-commerce (Teo et al. 2006); e-business (T Oliveira & Martins, 2011; K Zhu & Kraemer, 2005), knowledge management systems (KMS) (Lee & Wang, 2009) but the present study will employ use of E-marketing, technology orientation, market orientation, organization resources, top management support, pressure from trading partners, government support, competitive pressure variables, which have been used in the toe framework by a limited number of

studies. The other variables analyzed, methods used, data, and context of empirical studies is presented in below table;

Some authors used the TOE framework with other theories to understand IT adoption (Gibbs et al., 2003; Li, 2008; Oliveira & Martins, 2010; Thong, 1999; Zhu et al., 2006). Studies combining the TOE framework and DOI theories include the following. Thong (1999) joins CEO characteristics from DOI to the TOE framework. Chong et al. (2009) add innovation attributes (relative advantage, compatibility, and complexity) from DOI and an additional new factor in the adoption study called information sharing culture characteristics to the TOE framework. Zhu et al. (2006) combined relative advantage, compatibility, cost, and security concern from DOI with the TOE framework. Wang et al. (2010) add relative advantage, complexity, and compatibility from DOI to the TOE framework.

As further investigated by Rahayu and Day (2015) the TOE framework was selected as a theoretical foundation for the development of current study research model. This selection of framework is based on several considerations. Firstly, the TOE framework was recognized widely by the past literature and considered as a well-established framework to study e-commerce, e-business and other related technologies (Ramdani, Chevers, & Williams, 2013; Salwani, Marthandan, Norzaidi, & Chong, 2009; Sila & Dobni, 2012; Zhu et al., 2004). Secondly, the TOE framework reflects various contexts which not only focus on technological contexts but also considers organizational and environmental contexts. It is further identified that a model that covers several dimensions might give better

explanation power than a model that covers only single dimension (Molla & Licker, 2005; Rahayu & Day, 2015). Thirdly, the TOE framework was identified as a model which employs a understanding aspect regarding changes in the firms that determines not only by the individuals in the firm but also by the characteristics of the firm in which they work (Hameed et al., 2012). The interactive aspect allows to treat all the factors to interact in a single dynamic framework (Molla & Licker, 2005) and it is thought that this can explain adoption of IT innovation more systematically.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the conceptual framework, hypotheses development, operationalization of the variables and source of the survey items of the study. Furthermore, the research design which refers to the philosophical framework within which data is gathered and analyzed in the current study is discussed. Consequently, this chapter discusses the population, sample, data collection instrument and procedures for data analysis. Lastly, this chapter discuss about the methods and techniques for data collection and analysis. These include location, time and the unit of analysis as well as the sampling technique and size to be used.

3.1 Research Framework

Based on the literature review discussed in the last chapter and suggestions by several studies, this study has developed a framework to investigate the mediating role of the use of e-marketing in relationship between technological factors, organizational factors and environmental factors with performance of textile business in Pakistan and also the moderating role of technological opportunism on the relationship between the use of e-marketing and performance of textile firms in Pakistan. The research framework has eight independent variables which are further divided into three contexts, namely TO and RA represents technological context, TMS, MO and OR represents an organizational context and CP, GS and TP represents the environmental context of the firm. Firm performance is

the dependent variable, while use of e-marketing is the mediating variable and technological opportunism is the moderating variable. Lastly, based on the studied theories which are RBV theory, DOI theory and TOE framework, the study variables build a relationship and converted into the theoretical framework to obtain the results according to the current study objectives.

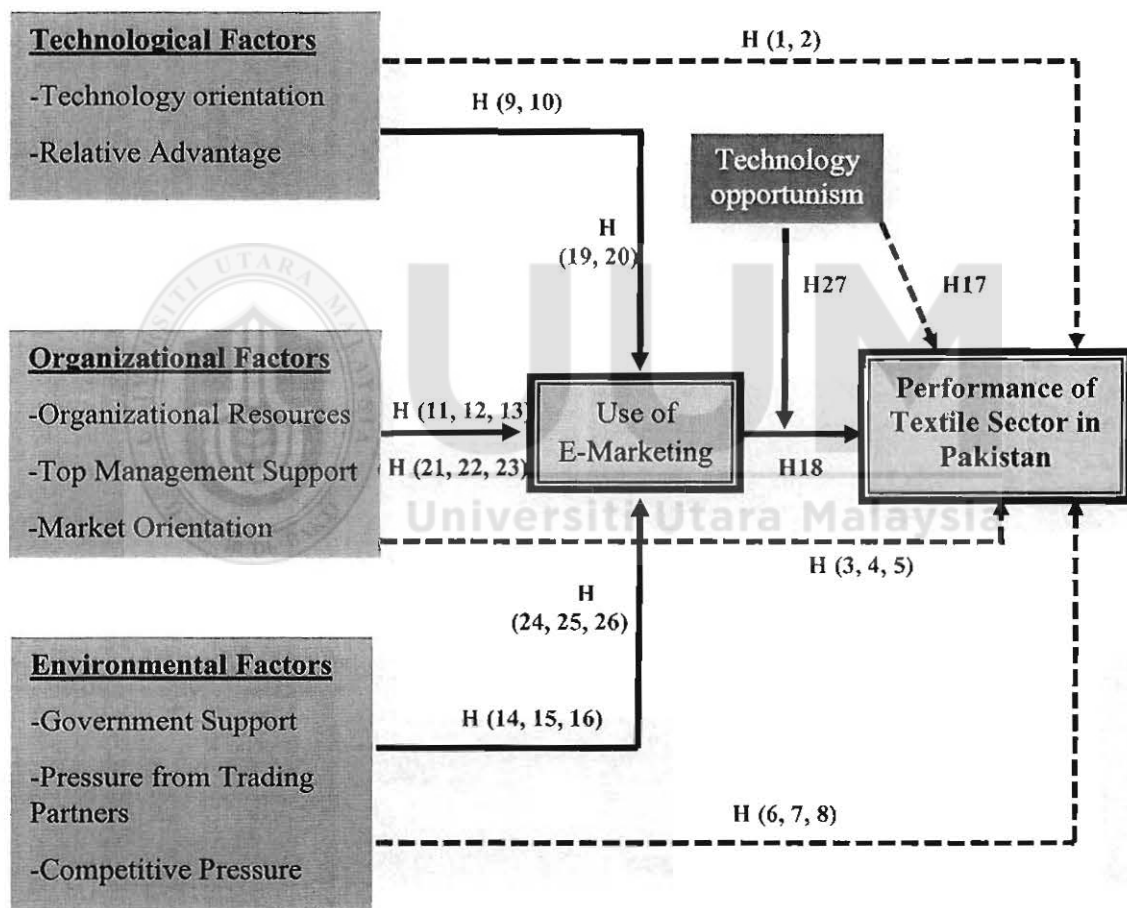


Figure 3.1
Research Framework

The current study framework has been established based on the renowned and well established past studies, theories and authors original work. Though to measure technology orientation 4-items scale by Gatignon and Xuereb's (1997) has been adapted where, relative advantage 4-items and top management support 4-items scale by Premkumar, Ramamurthy and Nilakanta (1994) has been adapted. Also, to measure the market orientation, 12-items scale by Narver and Slater (1990) were used. Moreover, to measure organizational resources 8-items scale and government support 4-items scale by Molla and Licker (2005) has been adapted. Moreover, 2-items scale by Iacovou, Benbasat, Dexter, (1995) has been adapted to measure pressure from trading partners also competitive pressure, 6-items scale by Jaworski and Kohli (1993) has included in current study. While, to measure the mediating variable which is use of e-marketing, 8-items scale and moderating variable which is technological opportunism 8-items scale by Srinivasan, Lilien, and Rangaswamy (2002) has been adapted. Finally, to measure the dependent variable, 7-items of firm performance by Hooley et al., (2005) has been adapted.

3.2 Hypotheses Development

Based on the objectives of the current study and available evidence in literature, the following hypotheses were developed. Hypotheses (H1-H8) were developed based on the first objective of this study, which is concerned with the direct relationship between the independent variables and the dependent variable. The second objective provides grounds for hypotheses (H9-H16) which were concerned with the relationship between the independent variables and the mediator variable. Based on the third objective of this study, hypotheses (H17-H18) were developed which were concerned with direct effect of

mediating variable and moderating variable on the dependent variable. Moreover, based on the fourth objective of this study, hypotheses (H19-H26) were developed which were concerned with the role of the mediating variable in the relationship between the independent variables and the dependent variable. Finally, hypothesis (H27) were developed based on the fifth objective of this study, which was concerned with the role of the moderating variable in the relationship between the mediating and the dependent variable. However, based on the literature review, following hypothesis has been developed for the current study;

3.2.1 Relationship between Technology Orientation and Firm Performance

Technology oriented firms appear to possess the ability and will to acquire better technologies and use it to achieve superior performance (Gao *et al.*, 2007). These firms have adopted the idea that innovation should be a strategic priority; as a result, they tend to excel in technical skills, adaptability and creativity and be proactive in the development of products and services (Paladino, 2007). Therefore, TO is a major way for a firm to create product differentiation and promote product designs that exceed those of competitors': as a result, firm performance would be enhanced (Hoq, 2009). The performance of the business firm can be improved through adaptive capability, so companies need to enhance their technological capacity (Zhou & Li, 2010).

Technology-led firms advocate a strong commitment to R&D, acquisition of new technologies and the application of the latest technologies which can lead to better performance (Mu & Di Benedetto, 2011). As a result, technology oriented firms have a

competitive advantage in terms of technology leadership and offer different products, which can lead to higher performance (Spanjol et al., 2011). Hakala and Kohtamaki (2010) opine that TO have a positive relationship with a firm's product and overall performance.

It is claimed by several past studies that technological orientation is positively associated with firm performance, which implies that higher the technology orientation, higher the firm performance. Moreover, empirical results also demonstrated a positive relationship between technology orientation and firm performance (Gatignon & Xuereb, 1997; Jeong, Pae, & Zhou, 2006; Salavou, 2005; Zhou et al., 2005). Further, it is also found by Sürer and Mutlu (2015) that the effect of technology orientation on performance was positive under any circumstance(s), especially when technology in a particular sector changes rapidly. However, technology orientation positively and significantly effects firm performance. So, based on the above discussion and literature, the researcher has articulated the following hypothesis;

H₁: Technology orientation is positively related to performance of textile sector in Pakistan.

3.2.2 Relationship between Relative Advantage and Firm Performance

According to several previous empirical studies, which has found that relative advantage has a significant and positive relationship with firm performance. Likewise, increased relative advantage gives the firm competitive advantage over other firms and help the firms to increase its efficiency and effectiveness. Moreover, according to Ahmad, Rahim, Bakar

and Mohamed (2014) and several other past studies advocated that the relative advantage positively influence firm performance, particularly in terms of growth (Qureshi et al., 2010; Raymond et al., 2005), financial gain (Johnston et al., 2007) and competitive advantage (Teo, 2007). Though, this research is motivated to examine that how the textile firms perceive these benefits which are associated with use of e-marketing for instance; increase of revenues and profits, customer service quality, business operation stability, cost reduction and finally the development and segmentation of new foreign and local markets. Therefore, the researcher has developed the following hypothesis;

H₂: Relative advantage is positively related to performance of textile sector in Pakistan.

3.2.3 Relationship between Organizational Resources and Firm Performance

The organizational resources are defined by Barney (1991) as; “firm resources include all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement the strategies that improves its efficiency and effectiveness”. Organization resources play a vital role in handling the external threats because resource rich firms perceive less uncertainty in the environment because more organizational resources (like financial reserves, social capital or culture, human resource, business resources and marketing capabilities) help the firms to work more efficiently for increased performance as compared to poor resource firms.

In the Past, several empirical studies have been undertaken, who confirmed that there is a positive relationship between firm resources and organization performance because

organization with greater resources and greater values/norms can help the human resource to work more efficiently and to create a better working environment for the success of the organization (Ahmad, Rahim, et al., 2014; Kyriakopoulos et al., 2004; Liang et al., 2010; Rahayu & Day, 2015). Therefore, it concludes that higher the organization resources, higher the performance of the firm. Thus, based on the above literature findings, the researcher has developed the following hypothesis;

H₃: Organizational resources is positively related to performance of textile sector in Pakistan.

3.2.4 Relationship between Top Management Support and Firm Performance

The extent to which CEOs impact the firm performance is considerably important to scholarly understanding of, how organizations operate; until now, this relation is poorly implicit. Previous empirical studies in order to examine the relationship among CEOs and firm performance used adjustments, though challenging, however, suffer from methodological problems, which systematically reduces the relative influence of CEOs on the performance of the firm as a contrast to industry and firm effects. (Mackey, 2008; Rahim et al., 2015a; Varukolu, 2007).

However, based on the literature, 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 et al., 2004; Varukolu, 2007).

Besides, many empirical studies have been undertaken by researchers who claimed that top management support is positively associated with firm performance, which implies that most of the strategic decisions on development and design, planning & production, innovation & exporting are likely to be made under the umbrella of top management. The activities and decision made by the top-management are likely to have a positive impact on the organization change, evolution, and growth because those at the higher management levels have more influence upon the decision and the decisions are strategic in nature (Carpenter et al., 2004; El Gohary, 2012; Varukolu, 2007). Therefore, the researcher has come-up with the following hypothesis;

H4: Top management support is positively related to performance of textile sector in Pakistan.

3.2.5 Relationship between Market Orientation and Firm Performance

A number of empirical studies which tested the impact of MO on performance have reported that MO improves the firm performance. For example, Baker and Sinkula (2009) report a significant positive relationship between MO and firm performance. As MO represents an ongoing response to customer needs and desires it facilitates the development of strategies focused on creating customer value, ultimately achieving competitive

advantage (Dauda & Akingbade, 2010). Alam (2010) emphasizes that considering customer needs and satisfaction as major priorities and constantly reassessing strengths and weaknesses relative to competitors, improves firm performance.

Thus, MO as a culture, is an important determinant of the firm performance because by tracking and responding to customer needs and preferences, market-oriented firms can better satisfy customers and enhanced financial performance (Mahmoud & Yusif, 2012; Nikoomaram & Ma'atoofi, 2011). The creation of a market-oriented firm culture and behavior, focusing on the collection of information about customer needs, competitor capabilities and market agents can be an important factor in achieving superior performance (Idar & Mahmood, 2011; Mahmoud, 2011). The effective and efficient ability of MO in creating the necessary behaviors towards better value for customers, can help firms to achieve continuous superior performance (Long, 2013; Wang *et al.*, 2012).

Several researchers have found a positive link between market orientation and firm performance (Rapp *et al.*, 2008; Zhou, Brown, & Dev, 2009). Moreover, studies indicate that market orientation represents a specific firm-level resource that enables organizations to sense marketplace requirements, Although, there is evidence (Deshpande *et al.*, 1993; Narver & Slater, 1990; Voola *et al.*, 2012) of positive association between MO and business performance. Hence, based on the above discussion and literature findings, the researcher has developed the following hypothesis;

H₅: Market orientation is positively related to performance of textile sector in Pakistan.

3.2.6 Relationship between Government Support and Firm Performance

The Pakistan textile industry is mainly affected by ineffective governmental policies, such as lack of R&D and IT implementation. This implies that IT needs vital attention and development in textile sector of Pakistan in order to avail the opportunities and get maximum market share with respect to its competitors (Kang & Park, 2012; Lau & Tong, 2008).

Several empirical studies have been conducted, who identified that there is a positive relationship between government support and firm performance. Because government support in terms of policies, subsidies, R&D facilities, IT infrastructure and tax relieves influences the firms to work more efficiently and effectively in order to achieve high growth and contribution in the GDP of particular countries (Shah et al., 2012; Shaher, 2012). Hence, based on the literature findings and suggestions, the researcher has developed a following hypothesis;

H₆: Government support is positively related to performance of textile sector in Pakistan.

3.2.7 Relationship between Pressure from Trading Partners and Firm Performance

Company's working in competitive business environment continuously focuses on the sales, and profitability of the business. Therefore, sometime organization feels lot of pressure from their trading partners. Likewise, a study by Calis et al. (1999) suggested that few companies have a selection procedure of trading partners for sharing of information and particularly the firms who are involved in imports or exports of the products are more

concerned about their trading partners and depends on informal and personal contacts for information.

Previously, many studies have conducted to reveal the fact that there is a positive association among pressure from TP and firm performance. However, past studies concludes that trading partners plays a vital role in sharing the information between organizations and this information sharing plays a crucial role in enhancing the performance of the firm that leads the firm toward cost effectiveness (Porterfield, 2008), additionally, a study by Arora and Vamvakidis (2004) illustrates that trading partners' growth has a strong effect on domestic growth of the country. However, Based on the literature, the researcher has developed a following hypothesis;

H7: Pressure from trading partners is positively related to performance of textile sector in Pakistan.

3.2.8 Relationship between Competitive Pressure and Firm Performance

Based on the past literature, the relationship between competitive pressure and firm performance has found positive. It implies that when companies analyze that their competitors are achieving their targets, catching up with the new customers, taking maximum market shares then the company start increasing their internal resource and changes their strategy to compete with their competitors to have a better image and this process will ultimately increase the performance of the firm (Amoako-Gyampah & Acquah, 2008; Ma, 2000; Newbert, 2008; Ortega, 2010; Saeidi et al., 2014). So, it can be

postulated that higher the competitive pressure, higher is the firm performance. Hence, based on the literature and above discussion, the researcher has developed a following hypothesis;

H₈: Competitive pressure is positively related to performance of textile sector in Pakistan.

3.2.9 Relationship between Technology Orientation and Use of E-Marketing

Technological orientation signifies a firm's execution and usage of a specific set of electronic marketing technologies, which can enable rich dialogs and interactions between seller and buyers. In line with the previous discussion, technological resources are a core predictor in the use of E-Marketing technologies towards internationalization. It represents the usage and implementation of E-Marketing technologies by diversified firms to interact with their customers and to make a sound dialog with them in order to generate more revenues (Trainor et al., 2011)

Moreover, the technology orientation has been tested as a predictor of technology adoption and usage in the context of SME's and service sectors of western countries (Brady et al., 2008; Raji Srinivasan et al., 2002; Sürer & Mutlu, 2015; Trainor et al., 2011) and several studies has also used TO in SME's and service sectors as a predictor of technology adoption in the context of developing countries like china, India, Singapore and Malaysia etc. (Hyung & Dedahanov, 2014; El Gohary, 2012; Rahim et al., 2015a). But, very limited studies have been done in the context of Pakistan at different perspective and particularly in the textile sector, which has been clearly ignored by the researchers as it is a major sector

of Pakistan as compare to other industry sectors. Hence, Based on the literature, the following hypothesis has been derived for this study;

H₉: Technology orientation is positively related to use of e-marketing in textile sector of Pakistan.

3.2.10 Relationship between Relative Advantage and Use of E-Marketing

A study on innovation by Tornatzky and Klein (1982) identified that Rogers' characteristic of RA is the only variable that has been constantly recognized as a critical factor for technology adoption, however, several studies also explained the importance of adoption factor (Chong et al., 2009; Tiago Oliveira & Martins, 2011; Rahim et al., 2015a). However, based on the past studies, relative advantage is considered to be one of the most frequently used characteristics in the e-commerce adoption (Kuan & Chau, 2001; Seyal et al., 2004). Most of the past studies have illustrated that perceived relative advantage is positively associated with technology adoption, particularly e-marketing use (Al-Qirim, 2007; Eid & El-Gohary, 2013; Kaynak et al., 2005; Rahim et al., 2015a). Thus, on the basis of above discussion and literature, the researcher has developed a following hypothesis;

H₁₀: Relative advantage is positively related to use of e-marketing in textile sector of Pakistan.

3.2.11 Relationship between Organizational Resources and Use of E-Marketing

A study conducted by Trainor, Rapp, Skinner, & Schillewaert (2011) mentioned that organizational resources, specifically, human resources that is also considered as a second dimension of the e-Marketing ability have considered to play a significant role to create value from information and technology adoption and usage. Moreover, past studies also connotes that the organization's resources (like human resource, culture and preferred work practices) are positively linked with e-commerce adoption (Grandon & Pearson, 2003). Moreover, the studies concluded that firms' that wish to adopt e-commerce, e-business, e-marketing in their organizations must ensure that there is an alignment between the culture and infrastructure of the organization (Trainor, Rapp, Skinner, & Schillewaert, 2011). So, based on the discussion and conclusion of literature, the researcher has developed a following hypothesis:

H₁₁: Organizational resources is positively related to use of e-marketing in textile sector of Pakistan.

3.2.12 Relationship between Top Management Support and Use of E-Marketing

Technology requires significant support from top executives for encouraging to adopt new technology and provides visionary leadership which clearly eloquent the need for the technology across the organization. According to Rahim et al. (2015a), management support has often found to be one of the most important internal determinant of innovation and e-marketing adoption. Therefore, a researcher claims that management support motivates to adopt e-marketing technology by giving strength to the firm's technology.

Furthermore, in the study of Rahayu and Day (2015) reveals that owners' IT ability and experience are also identified as a positive determinant factor of technology adoption by firms in developing countries. Hence, based on the literature and above relationships, the researcher has developed a following hypothesis;

H₁₂: Top management support is positively related to use of e-marketing in textile sector of Pakistan.

3.2.13 Relationship between Market Orientation and Use of E-Marketing

Market orientation and use of technology has been measured as "the use of internet technologies that link customers, suppliers, business partners and employees by adopting at least one of the following activities: (i) websites that offer sales transactions; (ii) customer service websites; (iii) intranets; (iv) extranets; and (v) IP electronic data interchange". However, there is an evidence that firm capabilities influence innovation adoption as highlighted by Hult et al. (2004). In line with the evidence, the market orientation has recognized as an important determinant of the technology adoption, which positively influences e-marketing uses in the firms. For instance; Narver et al. (2000) argued and provide empirical evidence for a positive relationship between innovation and Market orientation. (Lucia-Palacios et al., 2013; Mutlu & Sürer, 2015; Voola et al., 2012). So, on the basis of above discussion and literature, the researcher has developed a following hypothesis;

H13: Market orientation is positively related to use of e-marketing in textile sector of Pakistan.

3.2.14 Relationship between Government Support and Use of E-Marketing

A country's willingness for businesses based on electronic media fundamentally depends on the government backing: promotional activities, governmental grants and also the regulatory values for establishing digital trading environment. But, in order to see the government encouragement for e-marketing usage, an empirical study is required (Hu, Wu & Wang, 2004).

Moreover, Seyal et al. (2004) clearly highlights that the impact of governmental policies and initiatives has shown direct and indirect stimulation to supply information, which produces faster technology. In line with a statement, the government has been a source of funding infrastructure for organizations. Furthermore, a study conducted by Utomo and Dodgson (2001) highlights that government plays an effective role as a facilitator in providing assistance to firms, which have limited IT resources. Therefore, it implies that there is a positive association between government support and e-marketing adoption/usage. So, on the basis of that the researcher has developed a following hypothesis;

H14: Government support is positively related to use of e-marketing in textile sector of Pakistan.

3.2.15 Relationship between Pressure from Trading Partners and Use of E-Marketing

The success of the Internet technology initiative by the organization not only depends on its own effort but also on the readiness of its trading partners for instance vendors, suppliers and consumers to involve in electronic interaction and transactions (Ahmad et al., 2014). Several previous studies have explained that pressure from trading partners has a significant and positive impact on the e-marketing or technology adoption. Because trading partners push the firms to adopt a particular technology which they are using for communication and business purposes (Abrar et al., 2008; Ahmad, Rahim, et al., 2014; Lucia-Palacios et al., 2013). Hence, based on the literature, the researcher has developed following hypothesis;

H₁₅: Pressure from trading partners is positively related to use of e-marketing in textile sector of Pakistan.

3.2.16 Relationship between Competitive Pressure and Use of E-Marketing

To maintain the position of competitiveness, one has to adopt the technology to grab maximum market shares both at local & international level and such activity increase the confidence level of the customers and help the company to increase their sales to pay back the investment in short span of time (Gupta et al., 2013; Kuan & Chau, 2001; Lal, 2002; Shrivastava, 1995). Furthermore, majority of the studies have shown that competitive pressure positively influences the e-marketing adoption in the firms because, nowadays, competitiveness has become a major issue and the industry want to compete each other. So, it implies that competitive pressure has become a major source in adoption of e-commerce or e-marketing technologies in the firms (Ahmad et al., 2014; Rahim et al.,

2015a; Kuan & Chau, 2001). Therefore, based on above discussion and literature, the researcher has developed the following hypothesis;

H₁₆: Competitive pressure is positively related to use of e-marketing in textile sector of Pakistan.

3.2.17 Relationship between Use of E-Marketing and Firm Performance

E-Marketing is a recent technology that has established considerable attention in the industry. Nevertheless, Chen and Lien (2013) claimed that in spite of the rapid growth of new technologies, leading organizations still use them at a sluggish rate. The study of El-Gohary (2012) specified that use of e-marketing technology is relatively a new concept, particularly for organizations working in the developing countries, who have inadequate resources and tough competition.

However, few studies found a positive relationship between the E-Business penetration and firm performance. A successful use of E-Marketing is one of the leading problem to succeed in achieving the business objectives. Furthermore, Studies clearly highlights that performance, effectiveness has a direct and positive relation with innovation adoption and can lead to firm performance in many ways (Barwise & Farley, 2005; Chen & Lien, 2013; Eid & El-Gohary, 2013; Mzee et al., 2015; Rahayu & Day, 2015). Thus, based on above discussion, below hypothesis has developed as follows;

H₁₇: Use of E-Marketing is positively related to performance of textile sector in Pakistan.

3.2.18 Relationship between Technological Opportunism and Firm Performance

Studies revealed that technological opportunism has a direct effect on innovation and e-marketing adoption (Srinivasan et al., 2002) as well as on the firm performance (Sarkees, 2011). Innovation diffusion is an antecedent that likely increases performance as it implies IT integration and assimilation. So, technology opportunism capability enhances IT diffusion strategy, which, in turn, influences firm performance and also technology opportunism directly affect the firm performance as well.

Technologically opportunistic firms are proactive in their search for innovations. Some authors examine this construct as the antecedent of the adoption and of the use of new technologies in different contexts. In their seminal work, Srinivasan et al. (2002) analyze the use of e-business and several studies have examined this construct as an antecedent of business-to-business market firms (Klinger, 2004; Mishra & Agarwal, 2010). However, Lopperi (2006) focus on wireless e-business, besides, firms that are more versus less technologically opportunistic are more likely to adopt a greater range of ITs and use them more intensively in all their business processes. All of the previous research reaches the same conclusion: the degree of technological opportunism is associated with adopting and implementing new technologies. Thus, based on above discussion, the following hypothesis has been developed;

H₁₈: Technological opportunism is positively related to performance of textile sector in Pakistan.

3.2.19 Mediating role of Use of E-Marketing with Technological Factors and Firm Performance

Firm's technological advancements and capabilities plays a critical role in the relationship between technology-based innovations and competitive advantage. Specifically, they suggest that the relationship between technology, such as e-business adoption and firm performance depends on the technology being driven by the processes, systems and values. Moreover, Liang et al. (2010) found that there is a weak relationship among technological orientation and the firm performance, however, the findings also implies that more studies may be required in the future to examine.

Besides, previous studies have found that technological factors such as (technology orientation and relative advantage) has an indirect and positive impact on firm performance through the mediating effect of e-marketing adoption. It also implies that technological resources and relative advantage have found to be an important determinant of firm performance with a mediating role of e-marketing extension (Abrar et al., 2008; Do Hyung & Dedahanov, 2014; Eid & El-Gohary, 2013; El-Gohary, 2012; Hatem Osman Aly Salem El-Gohary, 2009; Jennifer & Kenneth, 2004; Rahim et al., 2015a; Sürer & Mutlu, 2015; Trainor, Rapp, Beitelspacher, et al., 2011; Wang et al., 2010; Kevin Zhu & Kraemer, 2005). Thus, concluding the above discussion, the researcher has developed the following hypothesis;

H19: Use of e-marketing mediates the relation between technology orientation and firm performance.

H₂₀: Use of e-marketing mediates the relation between relative advantage and firm performance.

3.2.20 Mediating Role of Use of E-Marketing with Organizational Factors and Firm Performance

IT infra-structure and resources are valuable assets of the company which is used in order to enhance internal communication, improves product design & quality, effect in reducing design cycle, also lowers down the cost of product development. Thus, the worth of an organization resource can be increased in the existence of other complementary resources because sometime it is slightly difficult for the competitors to copy the complete effect (Bharadwaj, Bharadwaj, & Bendoly, 2007; Bhatt, Grover, & Grover, 2005).

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 (Beekhuyzen et al., 2005; Mombourquette, 2008).

Next, innovation has been argued by Wu et al. (2003) to mediate the effects of customer orientation on performance. In line with market orientation effect on performance through new technology usage is considered as vital for the company superior performance. However, 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.

However, previous studies have revealed that organizational factors such as (organizational resources, top management support and market orientation) has an indirect and positive impact on firm performance through the mediating effect of e-marketing adoption. (Ahmad, Rahim, et al., 2014; Al-qirim, 2007; Arifin & Frmanzah, 2015; Barney, 1991; Hong & Zhu, 2006; Kraatz & Zajac, 2001; Li, 2008; Mackey, 2008; Alemayehu Molla & Licker, 2005; Padilla-meléndez, 2009; Premkumar & Roberts, 1999; Rahayu & Day, 2015; Rahim et al., 2015a; Varukolu, 2007; Voola et al., 2012; Wang et al., 2010). Based on the above discussion, the following hypothesis has developed;

H₂₁: Use of e-marketing mediates the relation between organizational resources and firm performance.

H₂₂: Use of e-marketing mediates the relation between top management support and firm performance.

H₂₃: Use of e-marketing mediates the relation between market orientation and firm performance.

3.2.21 Mediating Role of Use of E-Marketing with Environmental Factors and Firm Performance

Government incentives and support were found to be significant and influencing e-marketing use in the firms because greater the government incentives as perceived by an

organization, the higher is the likely-hood of an organization to adopt E-Marketing in order to increase firm performance (Tan & Teo, 1998, 2000; Yap et al., 1994).

Next, increase in the industry competition, there is a need for firms to get progress in technology and to use the technology to attain and sustain competitive advantage. While, competition is the environmental variable that influence the businesses strategy, however, it has found to be a most significant persuader that governs the level of technology adoption and usage in an organization (Premkumar, 2003; Varukolu, 2007).

Lastly, trading partner pressure is found as the significant antecedent of innovation as trading partners pressure in the industry helps the firms to adopt the latest technology in the business transactions, communication purpose and to maintain the close relationship with suppliers and vendors (Chwelos, Benbasat, & Dexter, 2001).

However, previous studies have illuminated that environmental factors such as (government support, pressure from trading partners and competitive pressure) has an indirect and positive impact on the firm performance through the mediating effect of e-marketing uses. (Ahmad, Rahim, et al., 2014; Amoako-Gyampah & Acquah, 2008; Duan et al., 2012; Kazungu & Panga, 2015; Lucia-Palacios et al., 2013; Premkumar & Roberts, 1999; Rahim et al., 2015a; Seyal et al., 2004; Shah et al., 2012; Tam, 1998; Thatcher et al., 2006; Zhang et al., 2014). Based on the above discussion and literature, the following hypothesis has been developed;

H24: Use of e-marketing mediates the relation between government support and firm performance.

H25: Use of e-marketing mediates the relation between pressure from trading partners and firm performance.

H26: Use of e-marketing mediates the relation between competitive pressure and firm performance.

3.2.22 Moderating Role of Technological Opportunism

Technologically opportunistic firms are proactive in their search for innovations. Some authors examine this construct as the antecedent of the adoption and of the use of new technologies in different contexts. In their seminal work, Srinivasan et al. (2002) analyze the adoption and use of e-business. Furthermore, several studies have examined this construct as an antecedent of business-to-business market firms (Klinger, 2004; Mishra & Agarwal, 2010). However, Lopperi (2006) focus on wireless e-business, besides, firms that are more versus less technologically opportunistic are more likely to adopt a greater range of IT's and use them more intensively in all their business processes. All of the previous research reaches the same conclusion: the degree of technological opportunism is associated with adopting and implementing new technologies.

Additionally, firms are going to value positively those firms that sense and respond to technological changes (Chandy & Tellis, 2000)., Strong technologically opportunistic organizations might see the potential to collaborate with other stakeholders such as suppliers, customers and partners. In the end, this increases the customer value,

improvement in cash flows level and firm performance (Chen & Lien, 2013; Sarkees, 2011; Voola et al., 2012). Thus, based on the literature it has found that technological opportunistic firms brings innovation in the firms to achieve superior performance. Therefore the following hypothesis has been proposed for current study;

H₂₇: Technology opportunism moderates the relationship between use of e-marketing and firm performance.

3.3 Research Design

According to Sarantakos (1998) research methodology is "*the theory of the methods*" it is the way in which one makes sense of the object of inquiry. The research design of any research depends on the type of study (Ghauri & Grønhaug, 2005). It can be qualitative, quantitative or mixed based on the research problem to be answered; however, all approaches varies in terms of the nature of data. While, qualitative research depends on the data containing sentences, symbols, words, observations and photos. Apart from this side, quantitative research depends on the data containing numbers (Cooper, Schindler, & Sun, 2006). Although, the mixed research method depends on both qualitative and quantitative approaches (Creswell, Clark, Gutmann, & Hanson 2003). However, this study is quantitative in the nature and to make data collection, questionnaire survey technique was adapted to measure the performance of textile firms in technological perspective.

The main objective of the quantitative research is to investigate the cause & effect relationship among the variables and it also provides the generalization ability of the

population of this study (Hopkins, 2008). In line with the recommendation of Cooper et al. (2006), confirms that quantitative research design is the most suitable method to examine the association among the variables to apply theories, models and hypotheses. Similarly, Hair et al. (2011, 2014) also suggested that quantitative research design is suitable to analyze the relationship among groups and explanation of dependency among variables and this is considered as a most suitable way of testing hypotheses. Apart from that quantitative approach is based on positivist ontology and an objective (Bryman, 2012).

Moreover, as the study aims at examining the direct and indirect relationships between technological factors which are (technology orientation, relative advantage), organizational factors which are (organizational resources, top management support, market orientation), environmental factors which are (government support, pressure from trading partners, competitive pressure) and performance of textile sector in Pakistan through the use of e-marketing as a mediation and technological opportunism as moderator. Studies conducted by (Lucia-Palacios et al., 2013; Raji Srinivasan et al., 2002; Voola et al., 2012; Wu et al., 2003) also used a quantitative approach for identifying the effect of technological, organizational, environmental factors on firm performance through several intervening variables.

Furthermore, to meet the basic objective of the study, the survey or quantitative method approach was employed. However, this approach is best accepted and very commonly used technique in the strategic marketing, management and social sciences research. Furthermore, also recommended by different researchers, for example Myers (2009), Veal

(2005), Hair et al. (2014), Ringle et al. (2015). Secondly, the survey method is used for obtaining very precise statistical information (Whitfield and Strauss, 1998). Thirdly, this method is also regarded as the simplest and less expensive as compare to other samplings, especially, when the target sample population was widely spread in a geographical manner (Bryman, 2001). Fourthly, a very important benefit of this survey method is; the probable anonymity of the respondent, that could lead to more straight and valid responses. Finally, because of high standards and access of a survey method that is considered important from a data analysis point of view, the results could be generalized (Ghauri & Gronhaug, 2005; Kay Wong, 2013).

The current study involves the use of questionnaires as the main data collection technique for statistical analysis. Regarding the technique, the cross sectional strategy is used to find out the insights of the respondents, whereby the data has been collected to answer the research questions. However, the unit of analysis selected for the current study is the organizations, whereas the respondents are the general manager marketing of the textile industry, who are working in Spinning, weaving and dyeing mills of Pakistan.

Besides, the researcher selected cross-sectional study method. Generally, the survey method helps the researcher in collecting a huge number of data in a very quick and easy way, thus it can also be generalized to a large population. In addition to that various statistical techniques can also be used to analyze the data (Myers, 2009; Kay Wong, 2013). Furthermore, the director marketing or general manager marketing has been selected as a respondents to measure the impact of e-marketing uses, technological opportunism and

TOE factors on the performance of textile sector in Pakistan. These respondents are regarded as the main source of the information because they are the key decision-makers in the textile firms in Pakistan and directly responsible for sales promotion, electronic marketing, meeting with buyers, attend world exhibitions of textiles, marketing planning, adopting and implementing of marketing strategies within the textile industry.

3.4 Population and Sampling Technique

The process of sampling begins with the identification of the population. As illustrated by Sekaran (2009) who defines that “population relates to the overall group of people or organization which might be the interest to the researcher”. The target population of this study is the general manager marketing of the textile industry in Pakistan. The researcher included only general manager marketing are also termed as general manager in several firms who are working in various textile mills which are mainly located in Punjab and Sindh provinces of Pakistan. However, the below table explains about the population of textile mills in Punjab and Sindh provinces of Pakistan;

Table 3.1
Population of Textile Mills in Pakistan

Area (s)	Textile Mills in Punjab and Sindh
Punjab- Lahore	254
Punjab- Multan	91
Punjab- Faisalabad	264
Sindh- Karachi	309
Sindh- Sukkur	36

Source: <https://www.aptna.org.pk/>

3.4.1 Sample Size

Selecting a right sample is always considered as a crucial part in the achievement of any research. Moreover, the sample size could be determined, either by using the statistics or by the rule of thumb (Aaker, Kumar, & Day, 2001; Teddlie, 2007). Therefore, selecting a right sample is more crucial because practically it is not possible to gather data from every portion of the population due to high cost, time constraint and lack of research assistants to collect information. That's why, Cooper et al. (2006) and Zikmund et al. (2010) revealed that the sampling technique must be used to collect the data from the targeted population instead of collection of the data from every element of population. Moreover, selecting suitable sample from targeted population is expected to give more consistent and reliable results for the current study (Sekaran, 2003).

Furthermore, in 2011, Hair et al suggested that good sample size for the statistical analysis should be 10-20 times greater than the variables used in this research. Likewise, Hair et al. (2011, 2014) also recommended about minimum sample size for PLS-SEM analysis must be around 200 respondents. Thus, the required sample size of this research is more than 220 which is more suitable for statistical analysis as 11 variables has been used in this study.

In addition, it is also recommended by several researchers that the response rate in social science survey is reducing in many countries; although, the sample size were selected according to the expected percentage rate of non-response likewise it was stated that the response rate was 49% by Gardner (2012), 56% by Ahmad, Bodla and Hussain (2014),

68% by Hassan, Mukhtar, Qureshi and Sharif (2012), by managers of manufacturing sector in the context of Pakistan. Therefore, the final useable sample for this study was 480 responses from the total population of Punjab and Sindh that is 954. Practically, a bigger sample size is preferable to avoid the possibility of non-response bias (Sekaran, 2003). However, the response rate in current study is 58% and the useable questionnaires are 54%, this response rate concurred with the previous studies.

3.4.2 Sampling Technique

The decision about the selection of most suitable sampling method and the sample size depends on many factors. In line with the suggestion of Bryman (2008) and Newman (2006), decision about selection of sampling method depends upon time, cost and required accuracy. However, in current study, the list of APTMA and APBUMA member textile companies is taken as a sampling frame for this study. These textile companies are located in different geographical locations in Pakistan. In line with this view, Berenoson et al. (2009) suggested that under such condition, when the population of the study is distributed in different geographical locations, then the cluster probability sampling is the best option to get a representative sample. The main reason behind this is; it is cost effective and less time consuming in comparison to simple random sampling. In cluster sampling, several clusters are developed by dividing the total units in a frame in such a way, that each cluster should be representative of the study population. The cluster could be countries, cities, election districts etc.

In this current study, the target population covers all the textile units, located mainly in Punjab and Sindh provinces of Pakistan. Researcher requested All Pakistan Textile Mills Association (APTMA) and All Pakistan Bedsheets and Upholstery Manufacturers Association (APBUMA) for the complete lists of mills operating in these regions for conducting surveys. Because APTMA and APBUMA are the only private organizations, who are dealing with all the matters of the textile mills in Pakistan, but unfortunately researcher failed to get the complete lists from APTMA and APBUMA as well as from ministry of textile which is a government body. However, the complete lists of textile mills were not available due to certain reasons like, firstly, the documents were not updated, and thus it may give misleading information about the number of mills operating in Punjab and Sindh.

Secondly, APTMA and APBUMA has no data regarding the number of employees particularly in the marketing department in Punjab and Sindh regions. Therefore, the use of simple random sampling might not be possible for this current study, because each population element cannot get the same chance of being included in the sample. Therefore, at this current study, the cluster or area sampling method is considered as more appropriate. Furthermore, Sekaran and Anderson (2004) also suggested that area sampling is the most common and recognized type of the cluster sampling, especially, when the research design comprises on geographic clusters.

Keeping in mind the explanation of cluster probability sampling given by Berenoson et al. (2009), the APTMA and APBUMA member companies are divided into four clusters. The

division is based on the four provinces of Pakistan which are Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa. Among these provinces, Punjab and Sindh has been selected for current study. However, Punjab is the largest producer of cotton and the major portion of the textile manufacturing industry is established in Punjab province. On the other hand, Sindh province which include the largest city of Pakistan i.e. Karachi, has a sea port for export purpose (Pakistan Economic Survey, 2013-2014). Thus, it was decided that all the members of the organization of APTMA and APBUMA located in the province of Punjab and Sindh would be considered as the sample of the study. A total of 954 textile firms has been found as a members of APTMA and APBUMA who are operating in Punjab and Sindh.

After organizing area cluster, proportionate sampling was done with multi-stage sampling, at first stage, researcher selected Pakistan country as a population then segregate the regions based on four provinces of Pakistan which are Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan, in third step, among four (4) provinces, two (2) provinces has been list down which are Sindh and Punjab province. Though, Punjab and Sindh has further divided into five parts or cities according to the textile mills location mentioned in APTMA and APBUMA list. The name of the cities including in these five clusters are Lahore, Multan, Faisalabad, Karachi, and Sukkur. It has been identified on the basis of location (area) of the Textile mills of Pakistan. For the present study, a multi- stages cluster sampling method was used to collect the required number of data for analysis. All cluster selected for this study with equal probability or with probability proportional sampling (Allen, et al., 2002).

Table 3.2
Cluster sampling with proportionate technique

Clusters	No. of Firms	Total Textile Firms	Sample	Req. Sample size	Required sample from each cluster	Actual Response Received
Punjab Province						
Lahore	254	954	26.6%	480	128	64
Multan	91	954	9.5%	480	46	29
Faisalabad	264	954	27.7%	480	133	72
Sindh Province						
Karachi	309	954	32.4%	480	156	103
Sukkur	36	954	3.6%	480	18	09

Hence, the final useable sample for this study was 257 after receiving back the questionnaires. Practically, a bigger sample size is preferable to avoid the possibility of non-response bias (Sekaran, 2003).

3.5 Operationalization of Variables

3.5.1 Operationalization of Technology Orientation

In this study, technology orientation is defined as "firm emphasis to develop the product by using state-of-the-art technology and also doing research and development to bring latest technology in the organization and its implementation in all departments to create a paper free environment and to increase efficiency and effectiveness". To measure technology orientation, 4-items scale by Gatignon and Xuereb's (1997) has been adapted. The value of Cronbach alpha of these measures are 0.91. All the four items of technology orientation (TO) were measured using seven-point Likert scale "(1 = strongly disagree; 2

= Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)".

3.5.2 Operationalization of Relative Advantage

In this study, relative advantage is defined as "the extent to which organization believes that using a particular technology would enhance the overall performance of the organization as compare to other rivals". To measure relative advantage 4-items scale by Premkumar, Ramamurthy and Nilakanta (1994) has been adapted. The value of Cronbach alpha of these measures are 0.77. Hence in this study, RA is measured with 4-items using seven- point Likert scale "(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)".

3.5.3 Operationalization of Market Orientation

In this study, Market orientation is defined as "the organization's commitment in terms of information generation, monitoring and appropriate response between current and future customer needs and preferences". To measure the market orientation, 12-items scale by Narver and Slater (1990) has been adapted. The value of Cronbach alpha of these measures are 0.928. All the twelve items of market orientation (MO) were measured using seven-point Likert scale "(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)".

3.5.4 Operationalization of Top Management Support

In this study, top management support is defined as "a person or group of persons responsible for overall decision making in the implementation of technology in the firm

and to motivate their employees to use that particular technology". However, to measure the top management support, 4-items scale by Premkumar, Ramamurthy and Nilakanta (1994) has been adapted. The value of Cronbach alpha of these measures are 0.86. Hence in this study, Top management Support (TMS) is measured with 4-items using seven-point Likert scale "(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)".

3.5.5 Operationalization of Organizational Resources

In this study, organizational resources are defined as "those resources such as assets, capabilities, organizational processes, firm attributes, information technology and knowledge that enable the firm to conceive of and implement innovative technology to improve its efficiency and effectiveness". To measure organizational resources, 8-items scale by Molla and Licker (2005) has been adapted. The value of Cronbach alpha of these measures are 0.81. All the 8-items of organization resources (OR) were measured using seven-point Likert scale "(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)".

3.5.6 Operationalization of Government Support

In this study, government support is defined as "the government policies for industry growth and its various departments to promote, support, facilitate and regulate new technology and its various components for industry welfare and profitability". Moreover, to measure the government support, 4-items scale by Molla and Licker (2005) has been adapted. The value of Cronbach alpha of these measures are 0.77. All the 4-items of

government support (GS) were measured using seven-point Likert scale “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.5.7 Operationalization of Pressure from Trading Partners

In this study, pressure from trading partners is defined as “those business partners who helps and motivate the firms to adopt and implement technology in their business for routine business communication and building up a strong relationship for long term basis”. Besides, to measure the pressure from trading partners, 2-items scale by Iacovou, Benbasat and Dexter (1995) has been adapted. The value of Cronbach alpha of these measures are 0.84. Hence in this study, pressure from trading partners (TP) is measured with 2-items using seven- point Likert scale “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.5.8 Operationalization of Competitive Pressure

In this study, competitive pressure is defined as “that pressure in which organizations compare their resources and capabilities in terms of latest technology (e.g. e-marketing uses) to compete in global markets, getting a max market share, offering competitive price and increase in global reach”. Although, to measure the competitive pressure, 6-items scale by Jaworski and Kohli (1993) has been adapted. The value of Cronbach alpha of these measures are 0.91. Thus, 6-items of competitive pressure (CP) were measured using seven-

point Likert scale “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.5.9 Operationalization of Uses of E-Marketing

In this study, uses of E-Marketing is defined as “the extent, adoption or use of e-marketing by the firms to enhance their capabilities in terms of global access to buyers, inbound and outbound communication, internal administration, order taking, procurement of material, before and after sale services through online or digital way of marketing”. Moreover, to measure the use of e-marketing, 8-items scale by Srinivasan, Lilien and Rangaswamy (2002) has been adapted. The value of Cronbach alpha of these measures is 0.91. Thus, in current study, to measure 8-items of the use of e-marketing (UEM) as mediating variable, seven-point Likert scale was used, where, “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.5.10 Operationalization of Technological Opportunism

In this study, technological opportunism is defined as “the capability of the organization to sense and respond to new technologies and to adopt or implement the latest technology within the organization to achieve superior performance”. Besides, to measure technological opportunism, 8-items scale by Srinivasan, Lilien and Rangaswamy (2002) has been adapted. The value of Cronbach alpha of these measures are 0.92. Therefore, to measure 8-items of technological opportunism as a moderating variable, seven-point Likert scale has been used, where, “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.5.11 Operationalization of Firm Performance

In this study, firm performance is defined as “performance of the organization in terms of market share growth, financial performance and customer loyalty that can be achieved through use of e-marketing and its antecedents”. Here, firm performance measured by Hooley et al. (2005) has been divided into 3 sub-sections which are market performance, financial performance and customer loyalty that consists of total 7-items scale with Cronbach alpha of each section as 0.92, 0.91 and 0.93 respectively. Finally, in current study, all the 7-items of firm performance were measured as unidimensional by using seven-point Likert scale, where, “(1 = strongly disagree; 2 = Disagree; 3 = somewhat disagree; 4 = either agree or disagree (Neutral); 5 = somewhat agree; 6 = Agree; 7 = strongly agree)”.

3.6 Measurements of Variables and Instrumentation

The study adapted measurements based on the previous studies relevant to the current research context (Churchill, 1979). The research model consists of eleven variables: TO, RA, TMS, OR, MO, GS, CP, TP, use of e-marketing (UEM), technological opportunism (TOP), and firm performance (FP). In this study, the Likert scale was adopted for all the items, the respondents were asked to indicate their responses to each question on a seven-point scale.

The Likert scale is found to be more appropriate for this study due to the nature of the respondents and the information they are required to provide (Alreck & Settle, 1995).

Additionally, Krosnick and Fabrigar (1997) opine that a scale between five and seven points is more reliable than higher or lower scales and a scale with no midpoint may increase the measurement error. Similarly, Dawes (2008) states that a five or seven point scale is likely to produce better results and seven point scales are little better than five point scales (Sauro, 2010). Based on existing literature, Table 3.3 presents the adapted survey items that will capture the study variables.

Table 3.3
Variables, No. of Items, Source, Cronbach Alpha

Variables of the study	Number of items	Source	Cronbach Alpha
Technology orientation	<ol style="list-style-type: none"> 1. Our company has a large, strong network of technology providers 2. Our company has a better technological knowledge than our suppliers 3. Our new product is always state of the art technology based. 4. Our company is proactive in the development of new and technologies and customer applications 	Gatignon and Xuereb's (1997)	0.91
Relative Advantage	<ol style="list-style-type: none"> 1. the technology will allow our company to better communicate with our business partners 2. the technology will allow our company to cut costs in the business 3. implementing the technology will increase the profitability of our company 4. adoption of the technology will provide timely information for decision making 	Premkumar, Ramamurthy and Nilakanta (1994)	0.77
Market Orientation	<ol style="list-style-type: none"> 1. Our organization rapidly respond to competitive actions that threaten us. 2. Our salespeople regularly share information concerning competitors' strategies. 	Narver and Slater (1990)	0.928

	<p>3. Top management regularly discusses competitors' strengths and strategies.</p> <p>4. Our company business objectives are driven primarily by customer satisfaction.</p> <p>5. Our company strategy for competitive advantage is based on understanding of customer needs.</p> <p>6. Our company strategies are driven by beliefs about how we can create greater value for customers.</p> <p>7. Our organization measure customer satisfaction systematically and frequently.</p> <p>8. All of our business functions are integrated in serving the needs of our target markets.</p> <p>9. All of our business functions are responsive to each other's needs and requests.</p> <p>10. Our company top managers from every function regularly visit current and prospective customers</p> <p>11. Our company communicate information about customer experiences across all business functions</p> <p>12. Our company managers understand how we can contribute to creating customer value.</p>		
Top Management Support	<p>1. The owner of our company enthusiastically supports the adoption of new technologies</p> <p>2. The owner or manager has allocated adequate resources to adoption of these new technologies</p> <p>3. Top management is aware of the benefits of these new technologies</p> <p>4. Top management actively encourages employees to use the new technologies in their daily tasks</p>	Premkumar, Ramamurthy and Nilakanta (1994)	0.86
Organizational Resources	<p>1. Most of our organization employees are computer literate</p> <p>2. Most of our organization employees have unrestricted access to computers</p>	Molla and Licker (2005)	0.81

	<p>3. Our company people are open and trusting with one another</p> <p>4. Communication is very open in our organization</p> <p>5. Our organization exhibits a culture of enterprise wide information sharing</p> <p>6. Our organization have a policy that encourages grass roots e-marketing initiatives</p> <p>7. Failure can be tolerated in our organization</p> <p>8. Our organization is capable of dealing with rapid changes</p>		
Government Support	<p>1. Our organization believe that there are effective laws to protect consumer privacy</p> <p>2. Our organization believe that there are effective laws to combat cyber crime</p> <p>3. Our organization believe that the legal environment is conducive to conduct business on the Internet</p> <p>4. The government demonstrates strong commitment to promote e-marketing</p>	Molla and Licker (2005)	0.77
Pressure from Trading Partners	<p>1. Our organization suppliers strongly urge us to adopt e-marketing</p> <p>2. Our organization customers strongly insists that we implement e-marketing</p>	Iacovou, Benbasat and Dexter (1995)	0.82
Competitive Pressure	<p>1. Competition in our industry is cutthroat</p> <p>2. There are many "promotion wars" in our industry</p> <p>3. Anything that one competitor can offer, others can match readily</p> <p>4. Price competition is a hallmark of our industry</p> <p>5. One hears of a new competitive move almost every day.</p> <p>6. Our company competitors are relatively weak.</p>	Jaworski and Kohli (1993)	0.77
Use of E-Marketing	<p>1. Our organization use e-marketing resources (such as web site and e-mail) to communicate with customers.</p>	Srinivasan, Lilien, and Rangaswamy (2002)	0.91

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2. Our organization use e-marketing resources to support firm's traditional commercial activities (e.g. pricing information, customer service).
 3. Our organization use e-marketing resources to conduct commercial transactions (e.g. selling products and accepting payment via web site).
 4. Our organization have a computerized customer database that use to perform marketing activities (e.g. inform customers about new products).
 5. Our organization have implemented e-marketing in all business processes
 6. Our organization e-business plans are integrated into overall business plan
 7. Our organization has freed up the necessary funds for our e-business initiatives
 8. Our organization possess the adequate technological infrastructure and competencies to implement e-business as well
-

Technology
opportunity

1. Our organization is often one of the first in our industry to detect technological developments that may potentially affect our business.
 2. Our organization actively seek intelligence on technological changes in the environment that are likely to affect business.
 3. Our organization generally respond very quickly to technological changes in the environment.
 4. Our organization periodically review the likely effect of changes in technology on our business.
 5. Our organization is often slow to detect changes in technologies that might affect our business.
 6. This business lags behind the industry in responding to new technologies.
-

Srinivasan et al.
(2002)

0.92

	7. For one reason or another, Our organization is slow to respond to new technologies.		
	8. Our organization tend to resist new technologies that cause current investments to lose value.		
Firm performance	1. Our organization Sales volume achieved compared to competitors.		
	2. Our organization market share compared to competitors.		
	Financial performance		
	3. Our organization overall profit levels achieved compared to competitors.		
	4. Our organization profit margins compared to competitors.	Hooley et al. (2005).	0.92
	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.		

The reliability and validity of the collected data and the response rate largely depends on how the questions in the questionnaire are designed, the structure of the questionnaire and the rigor of the pilot testing (Saunders *et al.*, 2009). Questionnaires are found to be more appropriate for the study due to its advantages over other methods of data collection, in terms of better and straight-forward generation of statistics, such as coding, tabulation and analysis (Dawson, 2007). Most of the people are more familiar with questionnaires. Hence, they are more comfortable responding to questionnaires than participating in an interview. The accompanying cover letter to the questionnaire on the confidentiality of the respondents may encourage them to provide sensitive information compared to interview. Likewise, based on the characteristics of the respondents and objectives of the study, this study has employed close-ended questionnaire.

3.7 Pilot Test

A pilot test was performed to analyze the reliability and validity of instrument before going to collect data from whole population. This pilot study will helps to identify the anticipated problems and allows the researcher to make the instrument correct before starting the actual research. Moreover, in a study by Sekaran and Bougie (2010), validity measures “the extent to which an instrument is measuring” and what it should be measuring, while the reliability measures “the extent to which an instrument is free from error, consistent and stable across various items of the scale”.

3.7.1 Validity Test

To ensure how well an instrument measures what it is purported to measure, content/face validity was conducted in this study. Consultations were made with a small sample of respondents and/or a panel of experts to make a decision on the correctness of items selected to measure the variables. Experts were consulted included senior lecturers, associate professors and professors in OYA-GSB, Universiti Utara Malaysia and Bahauddin Zakaria University, Multan, Pakistan. Additionally, some textile firm’s general manager marketing and director marketing were also consulted for their inputs. On account of this, some items were re-worded/re-phrased appropriately to measure the construct and also to be understood by the potential respondents. Within two weeks, this process was completed, dated: (16th June 2016 to 30th June 2016).

After taking into account the observations of experts, the researcher adapted an improved version of the instrument, which was administered for the pilot study. In most pilot tests,

the sample is generally small (Fink, 2003), although it is usual to increase it to 100 responses (Dillman, 2007). Therefore, a total of 45 questionnaires were randomly distributed in Multan and Faisalabad textile firms. Out of the distributed questionnaires, 36 were collected and six were not properly completed, so only 30 responses were considered for the pilot study. However, the response rate of 80% was achieved.

3.7.2 Reliability Test

The method used by the researcher to test the inter-item consistency and reliability is the Cronbach's alpha coefficient (Sekaran & Bougie, 2010). After running the reliability test using SPSS v23, it has observed that all measurements gave the reliability from 0.712 to 0.858. These results are in line with the threshold value of Cronbach's alpha i.e. at least 0.60 and consider as average reliability, while a Cronbach of 0.70 or greater indicates that the instrument has a better reliability standard (Sekaran & Bougie, 2010; Hair Jr. *et al.*, 2010).

Table 3.4
Reliability Statistics for Pilot Study (n=30)

Variables	Cronbach's Alpha	No of Items
Technology Orientation (TO)	0.733	4
Relative Advantage (RA)	0.812	4
Market Orientation (MO)	0.758	12
Top Management Support (TMS)	0.828	4
Organizational Resources (OR)	0.811	8
Government Support (GS)	0.730	4
Pressure from Trading Partners (TP)	0.735	2
Competitive Pressure (CP)	0.858	6
Use of E-Marketing (UEM)	0.797	8
Technology Opportunism (TOP)	0.712	8
Firm Performance (FP)	0.747	7

According to Table 3.4, the Cronbach alpha value of all the constructs is more than the threshold value of .70, which confirms that all the constructs are reliable to use for current study. Based on the findings, the researcher included all the items for current study.

3.8 Data Collection

In current study, the researcher has collected the data by distributing the questionnaires among the general manager marketing of the targeted and selected textile organizations in Pakistan with a cover letter which explains the objective of this research. The cover letter is normally attached with the survey questionnaire to notify the marketing managers regarding the research and also about the usage purpose of the questionnaire. Precisely, the data collection took place between the periods of 1st July 2016 to 25th November 2016. The data was collected through a personally-administered questionnaire. The nature of the textile firms in Pakistan made it compulsory for this study to use personally-administered method in order to achieve the required number of responses. Consequently, this will ensure the non-response bias does not affect the results.

Moreover, personally administered questionnaire helps the researcher to establish more understanding with the respondents and the response rate may be greater since the collection of the questionnaires is instant. In addition, all completed responses can be collected within a short period of time (Sekaran & Bougie, 2010).

Usually, respondents did not experience this pattern in the context of Pakistan, because normally researchers send the questionnaire via emails which cause delay in response and sometime respondents are unable to understand the context of the questionnaire. In fact,

this unique nature establishes the credibility of researcher to the respondents which in turn increases the response rate. Therefore, this effort produced a good result and 257 usable questionnaires.

3.9 Techniques for Data Analysis

Intention to meet the research questions and the objectives of the study, SEM (called path analysis) is appropriate to identify multiple relationship effects such as direct effect and indirect effect by including mediation (Resampling bootstrapping technique) and moderation (product indicator approach). Thus, at the current study point of view, researchers employed SmartPLS (SEM) due to some following reasons. Firstly, it is most accepted and recognized technique in management and social sciences research which is recommended by different researchers (e.g. Henseler et al., 2009; Hair et al., 2014; 2016). Secondly, it has wide spread recognition in academic research and practice (Hair et al., 2012; Ringle et al., 2015). Thirdly, it is most important for testing theories (Hair et al., 2014; Hair et al., 2013). Fourthly, it was recommended by many researchers that PLS-SEM is most suitable for Prediction-oriented models or extension of an existing theory (Hair et al., 2011; Henseler et al., 2009). Fifthly, it can be conveniently applied to minimum sample size and measurement scales (Hair et al., 2014). Sixthly, PLS-SEM was employed because when theory is not well developed; then researchers mostly prefer PLS-SEM over CB-SEM, because of their approach to answer the research questions (Hair et al., 2014). Seventhly, PLS-SEM has the capability to even estimate the models which consists of one- and two-item scales as compare to other statistical software's (Hair et al., 2014).

Meanwhile, according to Hair et al. (2014), PLS-SEM provides evaluation for a sequence of individual regression formula. Similarly, PLS- SEM method is to check the outcomes and, therefore, it has delivered extra trustworthiness, as it allows for the requirements and examining of complicated path models and can also apply to small sample size (Hair et al., 2014). Hence this study have several relationship effects such as direct effect and indirect effect by including mediation and moderation, So that's why, this study used partial least squares to assess the reliability and validity as far as testing the structural model in line with recommendation of (Ringle et al., 2015; Chin et al., 2003; Hair et al., 2014). Eventually this study applied following steps of Henseler et al. (2009) for conducting the (PLS-SEM) path analysis. It is described into two models, first is measurement model and the second is the structural model.

In the model evaluation, measurement model starts by examining the individual item reliability. With regard to individual item reliability, researchers examined loading and cross loadings of all items of the study variables to point out any problem which serve as a pre-requisite for measurement model. In model evaluation, the measurement model was undertaken to ensure about the model validity and reliability. All the items were adapted from past literature. While this research undertake only confirmatory factor analysis (CFA) by using SmartPLS 3.0 (Ringle et al., 2015) which contains built-in feature of the CFA. Additionally, Vinzi et al. (2010) gave the rule of thumb for outer loading which indicates that outer loading must be 0.5 and above, whereas average variance extracted (AVE), it must be more than 0.50. However, items in outer loading less than 0.5 should be deleted

one by one with lowest value to improve the data quality and this technique is also validated by Hair et al. (2014).

Internal consistency reliability refers to the “extent to which all items on a particular sub scale are measuring the same concept” (McCrae, Kurtz, Yamagata, & Terracciano, 2011).

As for this study is concerned, the Cronbach’s Alpha values of each construct was calculated to determine the internal consistency of the data. Other than that the discriminant validity was determined by using the AVE as anticipated by Fornell and Larcker (1981).

Discriminant validity has been obtained by making a comparison of the correlation between the latent variables and with the square root of the AVE (Fornell & Larcker, 1981).

In line with recommendation of Fornell and Larcker (1981), the square root of AVE must be greater than latent variables which indicate discriminant validity.

After execution of measurement model, next moves towards the structural model that deals about the dependence of the relationships in the hypothesized model of the study.

According to Hair et al. (2014) structural model gives an inner modeling, analysis of the direct relationship between the constructs of the study and their t-values are path coefficients.

As revealed by Henseler, Ringle, and Sinkovics (2009), the path coefficient is same like standardized beta coefficient in regression analysis. Where beta values of the coefficient of the regression and t-values are examined to decide the significance.

Following the rule of thumb by Hair *et al.* (2014), t – value greater than 1.64 is considered to be as significant, which is further used for making decisions on the proposed hypothesis.

Furthermore, this study includes several direct and indirect effects through mediation and moderation. As far as mediation is concern, there are several techniques that have been used for mediation test such as Baron and Kenny (e.g. Baron & Kenny, 1986), Sobel test (e.g. Sobel, 1982) and bootstrapping (e.g. Preacher & Hayes, 2004; Hayes et al., 2009). However, in this study, resampling mediation technique (bootstrapping) was employed to test the indirect effect of each construct.

Furthermore, this research has used the “current testing procedure” of mediation which is also called “bootstrapping the indirect effect”. Several studies indicated that “Bootstrapping is a non-parametric resampling procedure” because this is a well authenticated way for testing the mediation effect (Hayes et al., 2009; Zhao et al., 2010). As suggested by Hair et al. (2014) that bootstrapping for mediation analysis is more appropriate for PLS-SEM due to its application on small sample size. In testing the mediating effect the more appropriate way was explained by the Preacher and Hayes (2004, 2008) also recommended by Hair et al. (2014) that bootstrap of given sampling distribution of the indirect-effects, which works for simple and multiple models.

Besides, for moderating variable, there are a series of techniques for testing the moderating effects such as hierarchal regression procedure which 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). In this study, SmartPLS 3.0

was employed by introducing the interaction term in the model (Ringle et al., 2015). This model is called as the main effect model and also the R square will be noted before introducing the term interaction. This study used moderating variables and used product indicator approach in the analysis (Chin et al., 2003).

Table 3.5
Analysis Technique for Answering Research Questions

Research Questions	Techniques
RQ1	Path Analysis
RQ2	Path Analysis
RQ3	Path Analysis
RQ4	Resampling mediation technique (bootstrapping)
RQ5	Product indicator approach

3.10 Conclusion

This chapter has thoroughly described the research methodology of the study by discussing the logic behind using quantitative research technique for the study. According to the requirement of quantitative technique, the measurement of each variable has been adapted from the past studies and used for the collection of data from the respondents through questionnaire technique. Before sending the questionnaire for data collection, the content of the questionnaire is validated by two academicians. After completing the content validity of the instrument, then a pilot study was conducted to check the reliability of the instrument by using the Cronbach Alpha statistics. After pilot study the questionnaire was distributed and collected from general manager marketing or director marketing working in textile sector of Pakistan. Additionally, the gathered data was analyzed in statistical analysis by using SmartPLS 3.0. Further Analysis interpretation, tables and diagram has explained in next chapter.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

The primary objective of this chapter is to provide research results, which include preliminary analysis, descriptive statistics consists of demographics, mean and standard deviation, reliability and validity also hypotheses tests. In detail, this chapter consists of following sections: Firstly, response rate, non-response bias and common method bias tests are presented; secondly, data cleaning, preliminary data screening and preparation are outlined, and details of the respondents are presented; thirdly, this chapter represents the results of present study using SmartPLS 3.0 path modeling, therefore, the results of tests for reliability and validity of the scales are assessed and presented which is the measurement model; and finally, the results of the testing of hypotheses, coefficient determination, the effect size and predictive relevance are examined and reported.

4.1 Response Rate

The data used for this research were collected from general manager marketing employed in textile firms of Punjab and Sindh provinces in Pakistan. Furthermore, series of reminders in terms of calls and emails were sent to the concerning General Manager Marketing / Marketing Manager / Director Marketing/ Owner of the textile firms and also few questionnaires were collected on the spot during meeting with the personnel's of marketing department, however, this technique is also validated by the study of Shah (2009). Besides, Out of 480 distributed questionnaires, only 277 (57.7%) textile mills returned the

questionnaires, but, out of 277 questionnaires, 257 (53.54%) questionnaires were considered valid, and other twenty (20) questionnaires were rejected due to high number of missing values which were more than 10% where only 5% missing values were allowed in each questionnaire. The collection and distribution of questionnaires were carried out in a period of five months from July, 2016 to November, 2016.

Table: 4.1
Response Rate of the Questionnaires

Response	Frequency/Rate
No of Questionnaires	480
Questionnaires Returned	277
Returned and Useable Questionnaires	257
Returned and Excluded Questionnaires	20
Questionnaires not returned	203
Response Rate	57.7%
Valid Response Rate	53.54%

Source: The Researcher

Hence, Table 4.1 exhibits that only 257 questionnaires were useable for subsequent analysis that gives a valid response rate of 53.54%, with total response of 58%. The response rate was obtained comparable to other several past studies using marketing manager of the manufacturing sector, the total response rate in such studies were 68% by (Hassan, Mukhtar, Qureshi, & Sharif, 2012), 64% by (Hassan, Shaukat, Nawaz, & Naz, 2013) in the context of Pakistan. According to Hair et al. (2010) good sample size for statistical analysis should be at least 10-20 times more than the variables. Concurrently, Hair et al. (2014) recommended that minimum sample size for SEM analysis is about 200 respondents. Hence the sample size of the present study is 257 which appears suitable for statistical analysis as compare to eleven (11) variables used in this study.

4.2 Tests of Non-Response Bias

After the confirmation of valid returned questionnaires, this study went ahead to check any differences between respondents and non-respondents. An independent t test was conducted on study variables, including independent. Mediating, moderating and dependent variables of the study to determine whether the responses receive from respondents who responded early (i.e. within 8 weeks) are significantly differed from those who responded late (i.e. after eight weeks). According to Malhotra et al. (2006) non response bias might affect the results. As a result of that the current study used independent T test analysis to determine the non-response bias by comparing mean, standard deviation and standard error mean of the study variables such as technology orientation, relative advantage, market orientation, organizational resources, top management support, pressure from trading partners, government support, competitive pressure, use of e-marketing, technological opportunism and firm performance.

A period of eight weeks was selected as a benchmark to differentiate between early and late responses. The time period of sixteen weeks assumes to be suitable for the participants to complete the questionnaires. In line with Malhotra et al. (2004) that late response by the respondents is an indication of their seniority or busy schedule to complete those questionnaires. Based on the returned questionnaires, there were 130 responses classified as early response and 127 were classified as late response. The benchmark used to check the non-response bias in the current study has been based on the study variables where a descriptive statistics done by the researcher indicates that there were no significant differences among the variables. Therefore the results revealed that most of the

questionnaires that were received late have been filled by the senior managers, who have a busy working schedule including some extra administrative job responsibilities. Lastly, the above results have been drawn from below given Table 4.2.

Table 4.2
Group Descriptive Statistics for the Early and Late Respondents

Variables	Response	N	Mean	Std. Deviation	Std. Error Mean
Technology Orientation (TO)	Early	130	3.7	.91	.08
	Late	127	3.0	.87	.08
Relative Advantage (RA)	Early	130	3.5	1.20	.10
	Late	127	4.1	1.32	.12
Market Orientation (MO)	Early	130	4.1	1.15	.10
	Late	127	3.5	1.01	.09
Top Management Support (TMS)	Early	130	3.8	1.05	.09
	Late	127	4.0	1.22	.11
Organizational Resources (OR)	Early	130	4.5	1.02	.09
	Late	127	4.4	1.12	.10
Government Support (GS)	Early	130	4.5	1.13	.10
	Late	127	4.4	1.08	.10
Pressure from Trading Partners (TP)	Early	130	4.1	1.35	.12
	Late	127	4.7	1.15	.10
Competitive Pressure (CP)	Early	130	3.5	1.15	.10
	Late	127	3.9	1.06	.09
Use of E-Marketing	Early	130	3.6	.98	.09
	Late	127	3.7	.98	.09
Technology Opportunism (TOP)	Early	130	4.2	.82	.07
	Late	127	4.3	.98	.09
Firm Performance (FP)	Early	130	4.2	.92	.08
	Late	127	4.1	.95	.08

Hence, based on the Table 4.2 it can be concluded that the group mean and standard deviation for early response and late response are not very different and non-response bias will not affect the generalizations of the findings, all two hundred and fifty seven (257) responses were utilized in data analysis.

Table 4.3
Levene's Test

	Levene's Test		t-test for Equality of Means						
	F	Sig.	T	DF	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
TO	.53	.47	6.59	255	.00	.73	.11	.51	.95
			6.59	255	.00	.73	.11	.51	.95
RA	1.35	.25	-3.85	255	.00	-.61	.16	-.92	-.30
			-3.85	251	.00	-.61	.16	-.92	-.30
MO	1.81	.18	4.07	255	.00	.55	.14	.28	.82
			4.08	252	.00	.55	.14	.29	.82
TMS	1.75	.19	-1.23	255	.22	-.17	.14	-.45	.11
			-1.23	248	.22	-.17	.14	-.45	.11
OR	.35	.55	0.72	255	.47	.10	.13	-.17	.36
			0.72	252	.48	.10	.13	-.17	.36
GS	.87	.35	0.53	255	.60	.07	.14	-.20	.35
			0.53	255	.60	.07	.14	-.20	.34
TP	3.25	.07	-3.87	255	.00	-.61	.16	-.91	-.30
			-3.88	250	.00	-.61	.16	-.91	-.30
CP	4.21	.04	-2.31	255	.02	-.32	.14	-.59	-.05
			-2.31	254	.02	-.32	.14	-.59	-.05
UEM	.51	.48	-1.18	255	.24	-.14	.12	-.38	.10
			-1.18	255	.24	-.14	.12	-.38	.10
TOP	4.68	.03	-1.24	255	.21	-.14	.11	-.36	.08
			-1.24	246	.22	-.14	.11	-.36	.08
FP	.00	.95	0.67	255	.50	.08	.12	-.15	.31
			0.67	254	.50	.08	.12	-.15	.31

In Table 4.3, the result of Levene's test based on FP, TO, RA, MO, TMS, OR, GS, TP, CP, TOP and the UEM shows that the variance between the early response and late response is almost same. In general, the two-tailed t-test indicates that there is no significant difference between early respondents and late respondents based on the study variables. Similarly, if the resulting P-Value of Levene's test is less than 0.05, the obtained differences in sample variances are unlikely to have occurred based on random sampling from population with

equal variance, thus, the null hypothesis of equal variance is rejected and it is concluded that there is a difference between the variance in the population. However, in current study levene's test has found insignificant results of most of the variables which implies that there is no such difference in early and late responses.

4.3 Data Coding

With respect to categorization of data coding, a study by Churchill (1999), revealed that data coding consists of two categories. The first category presumes that the code number should be assigned to each of the construct for ease of identification and data analysis. Secondly, the items would come out to adopt the constructs in the study such as every construct might have its own different aspect about the questions asked. Consistent with the argument of Churchill and Iacobucci (2004), the questions should be arranged in confirmatory with the construct (s). Therefore, the constructs used in the current study were coded as mentioned below in the Table 4.4.

Table 4.4
Variable Coding

Variables	Code
Technology Orientation	TO
Relative Advantage	RA
Organizational Resources	OR
Top Management Support	TMS
Market Orientation	MO
Government Support	GS
Pressure from Trading Partners	TP
Competitive Pressure	CP
Technological Opportunism	TOP
Use of E-Marketing	UEM
Firm Performance	FP

4.4 Common Method Bias Test

Since the data of the current research constructs were collected at the same time by using the same instrument, the common method bias might distort the data collected. Thus, keeping in view the anticipated problem caused by the common method bias in behavioral studies, this research performed a test to confirm that no variance is found in observed scores and correlations are also not inflated because of the methods effect. Common method bias refers to the variance attributable exclusively to the measurement procedure as opposed to the actual variables the measures represent (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

There are several studies which explains about the significance of common method bias in data (Bagozzi, 2011). A number of procedures and statistical techniques were used to treat the common method variance issue. These include wording questions in reverse, clarity of questions or items, confidentiality of the respondents and statistical Harman's one-factor test (Podsakoff *et al.*, 2003). In current research, un-rotated factor analysis with 67 items of all the constructs of this research shown that not a single factor accounted for more than 50% of the variance. The output revealed only 20.56% of the total variance that is accounted by a single factor, representing the absence of "common method bias" in this research. In line with the past literature, common method bias issue can see when a single factor explains more than 50% of the variance (Podsakoff *et al.*, 2003; Lowry & Gaskin, 2014).

4.5 Data Screening and Preliminary Analysis

As discussed earlier in chapter three, the data screening process was undertaken on data survey to identify the relevancy of data for multivariate data analysis. The importance of data screening in data analysis, particularly in quantitative research provides a solid groundwork for obtaining significant results. This argument is also supported by Hair et al. (2010) that quality of analysis must be based on quality of preliminary data screening. Needless for the management of the incomplete data, the identification of missing and incomplete questionnaires answered was done. Out of 277 questionnaires received 20 questionnaires were not valid due to incomplete response. Moreover, according to Hair et al. (2010) the incomplete questionnaires were excluded from further data analysis. After the screening process 257 questionnaires remain for further analysis and this total response is suitable to utilize in subsequent data analysis Hair et al. (2010).

The preliminary data analysis involved two procedures: missing value analysis and descriptive analysis of the latent variables. Firstly, the missing value analysis has been undertaken to examine and produce complete data set for subsequent model estimation. Secondly, in descriptive analysis, the latent constructs provide estimates of the characteristics of the data. With regard to the descriptive of the data, such as the mean, variance and correlation among variables have also been analyzed for appropriateness preceding to estimation of the measurement models. It is also essential to examine that there are no coding errors, that variables were coded adequately; these two procedures have been carried out and are detailed below.

4.5.1 Missing Value Analysis

In line with recommendation of Hair et al. (1995) missing data imputation has been thought to be suitable to apply in primary research data. Number of researchers for instance Honaker et al. (2010, 2011) and Dempster, Laird and Rubin (1997) recommended that Expectations Maximization Algorithm to impute missing data by multiple imputation and bootstrap. In line with the recommendation of previous authors, “Expectations Maximization” imputation is considered more reliable. Although, it is acceptable to implement the EM algorithm because it does not change the nature of the association between the variables (Honaker, King, & Blackwell, 2011).

However, in current study, out of 277 questionnaires, 20 have been excluded due to the high missing value ratios and researcher used only those questionnaires, which were complete and filled appropriately. Therefore, by adopting this strategy, the data seems more consistent and reliable while doing various analysis.

4.5.2 Descriptive Analysis of Latent Construct

After preliminary analysis the statistical description of the study constructs is find by means of descriptive analysis, where the statistical value of the variables for instance independent variable, moderating variable, mediating and dependent variables was examined. The descriptive statistics for current research constructs as explained in the Table 4.5 explains the maximum and minimum scores, the values of mean and standard deviation (SD) of this research constructs as used in current study. As mentioned in chapter three the

questionnaire used in current study was considered on a seven-point Likert scale ranging from 1 to 7.

The mean scores of current study constructs ranging from 3.33 to 4.48, the value of standard deviation for the study variables ranges from 0.96 to 1.29. In the present study mean scores of less than 3.00 have been categorized as low, mean scores between 3.00 and 5.00 categories as moderate and mean scores higher than five were categorized as high.

Table 4.5
Results of Descriptive Statistics of the Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Technology Orientation (TO)	257	1.00	7.00	3.33	.961
Relative Advantage (RA)	257	1.00	7.00	3.77	1.294
Market Orientation (MO)	257	1.00	7.00	3.81	1.116
Top Management Support (TMS)	257	1.00	7.00	3.88	1.139
Organizational Resources (OR)	257	1.00	7.00	4.48	1.071
Government Support (GS)	257	1.00	7.00	4.45	1.105
Pressure from Trading Partners (TP)	257	1.00	7.00	4.42	1.287
Competitive Pressure (CP)	257	1.00	7.00	3.69	1.113
Use of E-Marketing	257	1.00	7.00	3.67	.981
Technology Opportunism (TOP)	257	1.00	7.00	4.26	.906
Firm Performance (FP)	257	1.00	7.00	4.13	.930
Valid N	257				

4.6 Demographic Profile of the Respondents

Table 4.6 describes the profile of the respondents. In demographic analysis, the distribution of respondent's was initially based on the age, which illustrate that the majority of the respondents comes within the age range between 30-40 years (57.6%), about 28% includes within the age of 41-50 years, 6.61% are between the age of 51-60, about 6.2% includes in the age more than 60 years and remaining 1.6% are found in the age less than 30 years.

Moreover, male respondents has more response rate with 80.2% as compared to 19.8% who are female. In Pakistani culture and specifically in textile sector, the male holds the dominant positions in the companies. Besides, 75.1% of the responses received from the respondents who has done university graduation, another 15.2% holds the degree of postgraduate and remaining 9.7% holds a college certificate only. On the other side, 96.5% of the companies responded to the questionnaires are manufacturing based and only 3.5% of the companies were traders and brokerage houses. Next, 63.4% are selling their products both locally and internationally, where, 21% are selling only in the local market and the remaining 15.6% are selling in the international market only.

However, major response of 39.3% has received from the Karachi as it is a main city of Sindh province and Pakistan as well, which have a sea port for international trade purpose. Secondly, 23.7% response received from Lahore, which is also considered as a big city of Punjab province and this province is also popular for farming with major production of cotton, also 23.3% of the response received from Faisalabad which is the hub of textile

sector in Punjab, while 8.9% from Multan-Punjab and remaining 4.7% from different cities of Pakistan.

Table: 4.6
Demographic Profile of Respondents

Demography	Description	No of Responses	%age
Gender	Male	206	80.2
	Female	51	19.8
Age	Less than 30 Year	4	1.6
	30-40 Year	148	57.6
	41-50 Year	72	28.0
	51-60 Year	17	6.61
	More than 60 years	16	6.2
Qualification	College Certificate	25	9.7
	University Graduate	193	75.1
	Postgraduate Studies	39	15.2
My Enterprise is	Industrial/ Manufacturing	248	96.5
	Traders and Brokerage	9	3.5
My Enterprise Operate in	Spinning	65	25.3
	Weaving	55	21.4
	Knitting	26	10.1
	Printing & Dyeing	33	12.8
	Dyeing & Finishing	57	22.18
	Garments	21	8.17
	Manufacturer		
Textile Company Location	Lahore	61	23.7
	Karachi	101	39.3
	Multan	23	8.9
	Faisalabad	60	23.3
	Others	12	4.7
Our Enterprise is Selling	Nationally	54	21.0
	Internationally	40	15.6
	Both	163	63.4

Moreover, the firms are doing marketing activities through several electronic ways therefore current study revealed that firms depend on internet marketing varies in

percentage for instance as explained in Table 4.7 out of 257 firms, 54 firms are not using any internet marketing activity, 84 firms are using by 25%, 45 firms by 50%, 18 firms by 75% and only 6 firms are using internet marketing by 100%.

Next, in regard to e-mail marketing, out of 257 firms, 21 firms are not using e-mail marketing, 24 firms are using by 25%, 71 firms by 50%, 125 firms by 75% and only 16 firms by 100%. Further, in concern to mobile marketing, out of 257 firms, 14 firms are not using mobile marketing, 37 firms are using by 25%, 123 firms by 50%, 66 firms by 75% and only 17 firms by 100%.

Further with regard to intranet marketing, out of 257 firms, 34 firms are not using intranet marketing, 114 firms are using only by 25%, 95 firms by 50%, 11 firms by 75% and only 3 firms by 100%. Also, in B2B extranet marketing, out of 257 firms, 94 firms are not using extranet B2B marketing, 124 firms are using only by 25%, 24 firms by 50%, 13 firms by 75% and only 2 firms by 100%

Next, in business to government (B2G) marketing activity, out of 257 firms, 166 firms are not using B2G marketing activity, 72 firms are using only by 25%, 19 firms by 50%, and none depends by 75% and 100%.

Lastly, firms who are using other tools of e-marketing also varies in percentage, out of 257 firms, 109 firms are not using any other tool of e-marketing, where 93 firms are using only 25% of other e-marketing tools, 51 firms by 50%, 4 firms by 75% and none by 0%.

Table 4.7
Electronic Marketing Activities

In our enterprise we depend on	To conduct up to --- % of our electronic marketing activities				
	0%	25%	50%	75%	100%
Internet Marketing	54	134	45	18	6
E-Mail Marketing	21	24	71	125	16
Mobile Marketing	14	37	123	66	17
Intranet Marketing	34	114	95	11	3
Extranet Marketing Business to Business (B2B)	94	124	24	13	2
Business to Government (B2G)	166	72	16	2	1
Other tools or forms of E-Marketing	109	93	51	4	0

4.7 Assessment of PLS-SEM Path Model Results

All the items were adapted from previous studies as explained earlier in the previous chapter. This study evaluates the reliability and validity of the construct measures. The outer model implies the uni-dimensionality of the study variables, in the meaning of factor analysis. Then, after confirming the reliability and validity of the constructs measured, the structural models were assessed and also the relationships between the latent variables were examined. SmartPLS 3.0 by Ringle et al. (2015) was used to determine causal links among the constructs in these theoretical models.

After the checking and screening of the data as described in the previous discussion, the next step was to assess the outer model and the inner model (Esposito Vinzi et al., 2010; Hair Jr. et al., 2016). PLS-SEM 3.0 was used in this study to evaluate the outer model (measurement model) and the inner model (structural model). In other words, PLS-SEM was used to analyze the direct, mediating and moderating results of this study.

Before conducting the PLS-SEM analysis, the model has been configured in a way that it is clearly understood. To do this, indicators has been clarified and found that all the items are reflective in nature instead of formative. It is essential to note that model configuration is vital because the approach in testing the reflective measurement model is quite different from the approach used in testing the formative measurement model (Hair Jr. et al., 2016; Lowry & Gaskin, 2014). However, in this study, all the indicators of latent variables are reflective.

In line with suggestion of Henseler and Sarstedt (2013), goodness- of- fit (GOF) index is not suitable for model validation and recently another study conducted by Hair et al. (2014) support the above statement. Although, using the PLS path models with simulated data, the results of this study indicating that goodness-of-fit index is not suitable for models validation, due to that it would not valid separate models from an invalid model by (Hair, Ringle, & Saratedt, 2013). However, recent research and development of PLS path modeling unsuitability in models validations. This study following the two step process to evaluate and generate results of PLS SEM path, proposed by Henseler et al. (2009) as present study adopt two-step process one is assessment of measurement model and second one measurement of structural model as showing in figure 4.1 (Henseler et al., 2009; Hair et al., 2012; Hair et al., 2014).

As explained by Henseler et al. (2009), that PLS-SEM is two step modeling as explained in below figure 4.1.

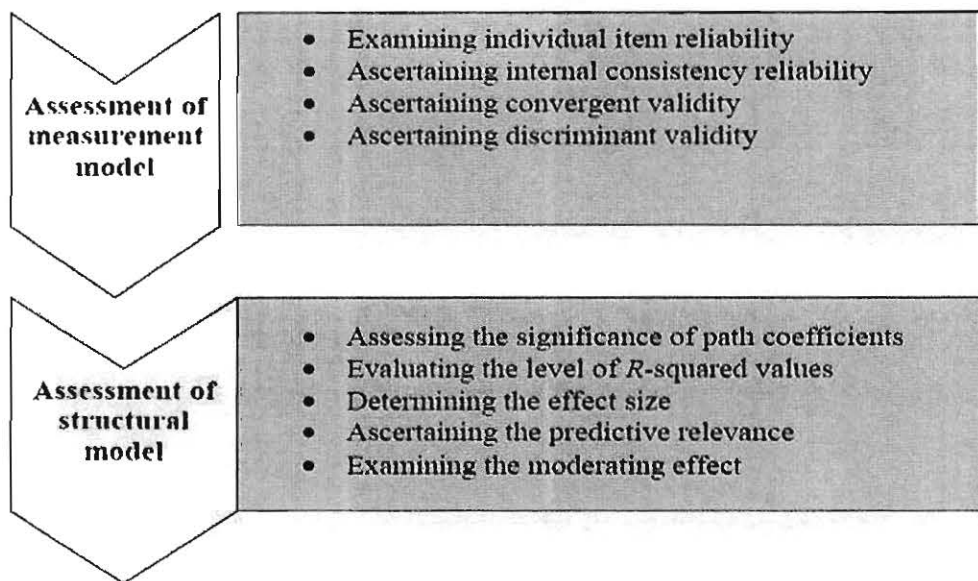


Figure 4.1
Two-step Process of PLS Path Model Assessment

4.8 Assessment of Measurement Model

The first step of analysis in PLS-SEM is the assessment of the measurement model (outer model). The outer model deals with the measurement of the component, which determines how well the indicators (items) load theoretically and associate with respective constructs. In other words, analysis of the outer model confirms that the survey items measure the constructs they were designed to measure, thus ensuring that they are reliable and valid.

Validity and reliability are the two key criteria's used in the analysis of PLS-SEM to assess the outer model (Hair Jr. et al., 2013; Hulland, 1999; Ramayah, Lee, & In, 2011). The assumption about the nature of the association between variables (inner model) based on the validity and reliability of the instruments. The appropriateness of the outer model can be evaluated by observing: (1) individual item reliability, i.e., internal consistency

reliability and indicator reliability using composite reliability (CR); (2) convergent validity of the instrument linked with individual variable by using average variance extracted (AVE); and (3) discriminant validity using Fornel Larcker criterion and the indicator's outer loadings.

To begin with, internal consistency usually measures the consistency of result between items of the same test. It measures whether the proposed items measuring the construct are producing similar scores (Hair Jr. et al., 2013). Therefore, in this study, internal consistency reliability was assessed by examining CR.

According to Hair Jr. et al. (2013), unlike Cronbach's alpha, CR does not assume an equal indicator loading of the construct. CR varies between 0 and 1; the threshold value should not be lower than 0.60 (Henseler et al., 2009) but value of 0.70 and above is most desirable (Hair, et al., 2012). Accordingly, CR value between 0.6 and 0.7 indicates average internal consistency, while value between 0.70 and 0.90 is regarded as more adequate (Nunnally & Bernstein, 1994).

In model assessment the measurement model was considered to confirm about the model reliability and validity. In line with the arguments of Vinzi et al., (2010) who gave the rule of thumb for outer loading. In line with the rule of thumb, the outer loading must be 0.50 and above. Next, the average variance extracted, it must be more than 0.50. However, in factor loading the value below 0.50 must be deleted one by one starting with lowest value,

as it improves the quality of overall data, this technique is also recommended by (Hair et al., 2013; 14).



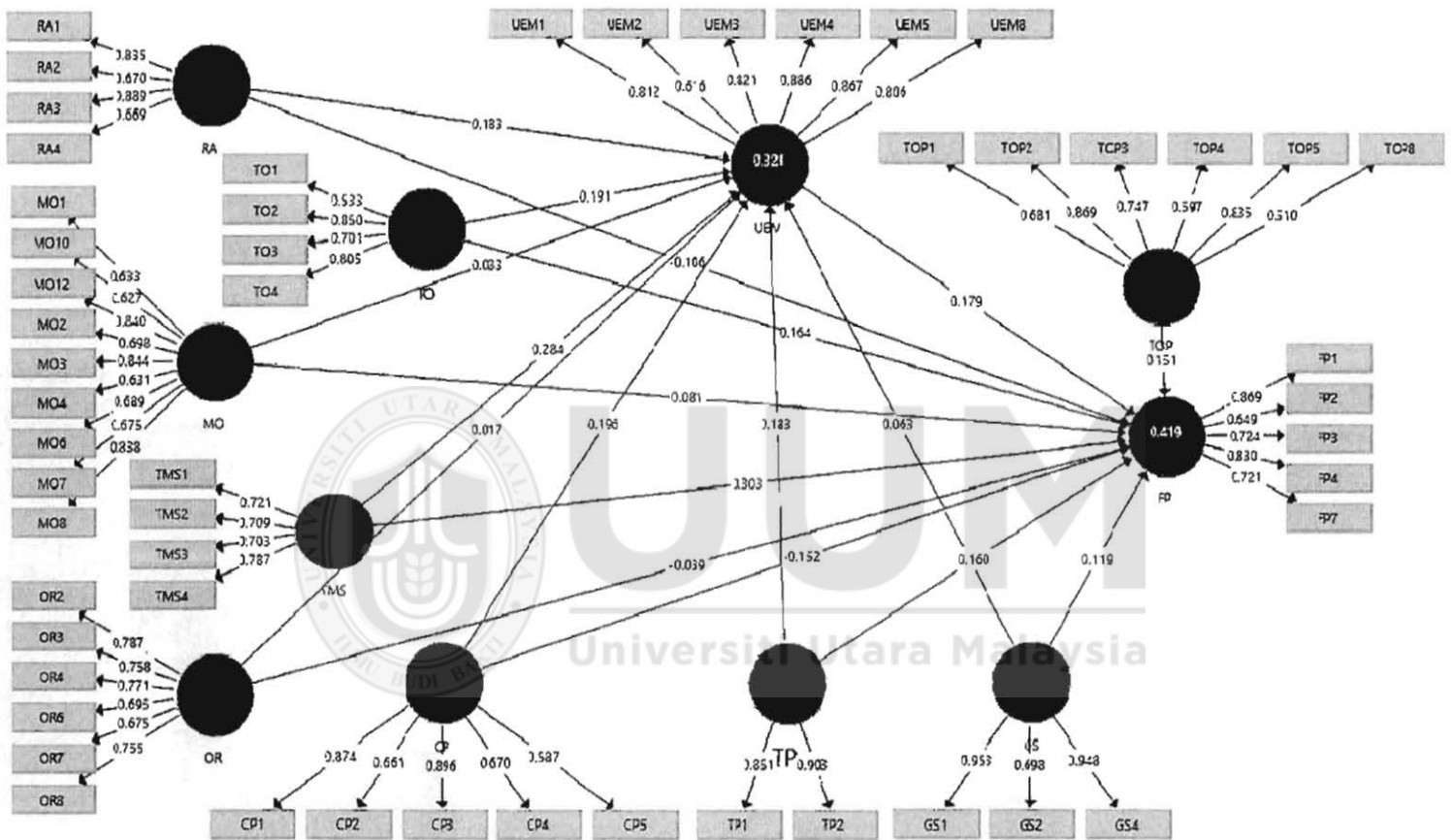


Figure 4.2
Measurement Model

4.8.1 Individual Items Reliability

Before determining the convergent validity the researcher examined loading and cross loadings of all items of the study variables to point out any problem which serve as a prerequisite for measurement model. In model evaluation, the measurement model was undertaken to ensure about the model validity and reliability. As mentioned earlier in chapter three all the measurements of the constructs were adapted from past literature, while this research considered only confirmatory factor analysis (CFA) by employing SmartPLS 3.2.6 (Ringle et al., 2015).

As recommended by Hair et al. (2010, 2014) that convergent validity is attained when the factor loading of all the items are more than 0.50 and not a single loading of any measurement from other variable have a greater loading than the one which think to measure. The findings highlighted that out of 67 items, 13 were deleted as their loadings were less than the cutoff value of 0.50. Thus, rest of the model left with 54 items which is within the range of 20% deletion of lower factor loadings and rest of the loadings were retained ranging from 0.510 to 0.953 (Hair et al., 2014).

4.8.2 Internal Consistency Reliability

Internal consistency reliability refers to the “extent to which all items on a particular sub scale are measuring the same concept” (McCrae, Kurtz, Yamagata, & Terracciano, 2011). Next, the composite reliability cutoff value must be at least 0.70 and AVE equals to more than 0.50 (Fornel & Larcker, 1981; Hair et al., 2014). As mentioned in Table 4.8 all the variables included in current study have AVE and composite reliability more than the

threshold value of 0.50 which is a suggestion of measurement model reliability. Moreover, this research also examined the Cronbach's Alpha to observe internal consistency of the data. Furthermore, George and Mallery (2003), provide the rule for deciding the value alpha; " $\alpha > 0.9$ - Excellent, $\alpha > 0.8$ - Good, $\alpha > 0.7$ - Acceptable". In current research, values of Cronbach's are in an acceptable range. The Table 4.8 explains that average variance extracted (AVE), Cronbach alpha and composite reliability values of all variables are in acceptable range.

Table 4.8
Loadings, Cronbach's Alpha, Composite Reliability and AVE of all the Latent Variables

Construct	Item	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Competitive Pressure (CP)	CP1	0.874	0.795	0.861	0.560
	CP2	0.661			
	CP3	0.896			
	CP4	0.670			
	CP5	0.587			
Firm Performance (FP)	FP1	0.869	0.821	0.873	0.582
	FP2	0.649			
	FP3	0.724			
	FP4	0.830			
	FP7	0.721			
Government Support (GS)	GS1	0.953	0.836	0.905	0.765
	GS2	0.698			
	GS4	0.948			
Market Orientation (MO)	MO1	0.633	0.897	0.908	0.526
	MO10	0.627			
	MO12	0.840			
	MO2	0.698			
	MO3	0.844			
	MO4	0.631			
	MO6	0.689			
	MO7	0.675			
	MO8	0.838			
	OR2	0.787			

	OR3	0.758			
	OR4	0.771			
Organizational Resources (OR)	OR6	0.695			
	OR7	0.675			
	OR8	0.755			
	RA1	0.835	0.784	0.853	0.596
	RA2	0.670			
Relative Advantage (RA)	RA3	0.889			
	RA4	0.669			
	TMS1	0.721	0.757	0.821	0.534
	TMS2	0.709			
Top Management Support (TMS)	TMS3	0.703			
	TMS4	0.787			
	TO1	0.533	0.701	0.818	0.537
	TO2	0.850			
Technology Orientation (TO)	TO3	0.701			
	TO4	0.805			
	TOP1	0.681	0.811	0.861	0.515
	TOP2	0.869			
Technology Opportunism (TOP)	TOP3	0.747			
	TOP4	0.597			
	TOP5	0.835			
	TOP8	0.510			
	Pressure from Trading Partners (TP)	TP1	0.851	0.704	0.870
TP2		0.903			
Use of E-Marketing (UEM)	UEM1	0.812	0.890	0.917	0.650
	UEM2	0.616			
	UEM3	0.821			
	UEM4	0.886			
	UEM5	0.867			
	UEM8	0.806			

Lastly, Table 4.8 exhibits that Cronbach alpha of all the variables is more than 0.70. So this indicates that all variables of current study have a good consistency. Besides, Table 4.8 exhibits that all the variables have high reliabilities and their AVE's are more than threshold values, which confirms the reliability of measurement model.

4.8.3 Discriminant Validity

Farrell and Rudd (2009), defined discriminant validity as “the extent to which a particular latent variable is different from other latent variables”. In current study, discriminant validity was analyzed by using AVE as recommended by (Fornell & Larcker, 1981). Discriminant validity was obtained by comparing the correlation among the latent constructs with the square root of AVE as suggested by (Fornell and Larcker, 1981). Furthermore, to assess the discriminant validity, Fornell and Larcker (1981) recommends the use of the average variance extracted with a score of 0.50 or more.

To investigate the discriminant validity this research considers discriminant validity to confirm the external consistency of the model. However, the comparison among the latent constructs as explained in Table 4.8 summarize the square root of AVE of the constructs: Competitive Pressure (CP) = 0.75; Firm Performance (FP) = 0.76; Government Support (GS) = 0.87; Market Orientation (MO) = 0.73; Organizational Resources (OR) = 0.74; Relative Advantage (RA) = 0.77; Top Management Support (TMS) = 0.73; Technology Orientation (TO) = 0.73; Technology Opportunism (TOP) = 0.72; Pressure from Trading Partners (TP) = 0.88 and Use of E-Marketing (UEM) = 0.81.

Table 4.9
Discriminant Validity Matrix

	CP	FP	GS	MO	OR	RA	TMS	TO	TOP	TP	UEM
CP	0.75										
FP	0.00	0.76									
GS	0.08	0.20	0.87								
MO	-0.17	0.16	-0.03	0.73							
OR	-0.49	-0.01	-0.01	0.21	0.74						
RA	0.16	-0.13	-0.02	-0.08	0.04	0.77					
TMS	0.17	0.51	0.09	0.07	-0.08	0.02	0.73				
TO	0.09	0.37	0.16	0.21	-0.08	-0.25	0.29	0.73			
TOP	0.09	0.30	0.08	0.01	0.03	0.02	0.40	0.06	0.72		
TP	0.12	0.26	0.01	-0.04	-0.03	0.05	0.18	0.07	0.09	0.88	
UEM	0.30	0.36	0.13	0.04	-0.11	0.18	0.42	0.27	0.06	0.28	0.81

Note: All the values shown in diagonal and bolded represent the square route of average whilst those of the diagonal represent latent variable correlations

Table 4.9 explains that the square root of AVE is greater than the correlation between latent variable indicating the acceptable discriminant validity (Fornell & Larcker, 1981). At the first of this study delivered an explanation of the framework and indicated the links of the relationship among the variables based on what has been obtained in the previous literature that probably has to be revised and modified due to the confirmatory factor analysis undertaken in this study. After performing CFA in this study none of the variable was dropped even every few items have been deleted, because in line with the recommendation with Hair et al. (2013) the entire variables retained at least two items as a condition not to be deleted.

Table 4.10

Loading and Cross loadings

	CP	FP	GS	MO	OR	RA	TMS	TO	TOP	TP	UEM
CP1	0.87	0.00	0.09	-0.08	-0.37	0.12	0.16	0.12	0.11	0.14	0.29
CP2	0.66	0.07	0.00	-0.16	-0.38	0.15	0.20	0.01	0.10	0.10	0.18
CP3	0.90	-0.02	0.04	-0.15	-0.38	0.16	0.12	0.09	0.06	0.13	0.27
CP4	0.67	-0.01	0.07	-0.23	-0.39	0.18	0.12	0.02	0.04	0.01	0.21
CP5	0.59	-0.06	0.08	-0.02	-0.33	-0.07	-0.02	0.09	-0.02	0.03	0.12
FP1	0.01	0.87	0.10	0.18	0.03	-0.19	0.46	0.36	0.30	0.24	0.38
FP2	0.06	0.65	0.19	0.08	-0.10	-0.04	0.42	0.27	0.27	0.17	0.27
FP3	0.04	0.72	0.24	0.04	-0.08	-0.05	0.32	0.24	0.09	0.21	0.21
FP4	-0.12	0.83	0.06	0.22	0.14	-0.12	0.41	0.28	0.32	0.21	0.28
FP7	0.03	0.72	0.23	0.04	-0.10	-0.07	0.30	0.25	0.09	0.18	0.19
GS1	0.05	0.17	0.95	-0.01	-0.02	-0.04	0.08	0.13	0.06	0.01	0.13
GS2	0.09	0.16	0.70	-0.06	0.01	0.02	0.06	0.17	0.09	0.00	0.07
GS4	0.06	0.18	0.95	-0.02	-0.02	-0.03	0.09	0.12	0.07	0.00	0.13
MO1	-0.12	0.06	0.01	0.63	0.12	0.00	0.07	0.11	-0.02	0.06	0.12
MO10	-0.14	0.04	0.02	0.63	0.13	-0.01	0.03	0.09	-0.02	0.00	0.06
MO12	-0.14	0.16	-0.03	0.84	0.16	-0.12	0.04	0.20	0.04	-0.06	-0.02
MO2	-0.12	0.10	-0.03	0.70	0.17	0.01	0.08	0.12	-0.02	0.01	0.07
MO3	-0.14	0.16	-0.03	0.84	0.16	-0.11	0.03	0.19	0.05	-0.06	-0.01
MO4	-0.14	0.03	0.02	0.63	0.13	0.00	0.04	0.08	-0.01	0.01	0.07
MO6	-0.10	0.08	-0.03	0.69	0.17	0.00	0.09	0.10	0.00	0.01	0.06
MO7	-0.13	0.09	-0.03	0.68	0.18	-0.01	0.07	0.12	-0.01	-0.04	0.03
MO8	-0.15	0.18	-0.05	0.84	0.16	-0.13	0.04	0.22	0.02	-0.06	-0.01
OR2	-0.39	0.00	-0.02	0.22	0.79	0.02	-0.03	-0.08	-0.02	-0.04	-0.09
OR3	-0.33	-0.01	0.01	0.14	0.76	0.08	-0.01	-0.04	0.06	0.01	-0.07
OR4	-0.35	-0.05	0.02	0.14	0.77	-0.02	-0.13	-0.06	-0.01	-0.09	-0.10
OR6	-0.35	-0.04	-0.03	0.12	0.69	0.07	-0.03	0.00	-0.01	0.09	-0.01
OR7	-0.38	-0.01	-0.08	0.17	0.68	0.06	-0.03	-0.02	-0.06	0.08	-0.02
OR8	-0.41	0.03	-0.03	0.14	0.75	0.05	-0.07	-0.07	0.08	0.02	-0.09
RA1	0.14	-0.14	-0.07	0.01	0.05	0.84	-0.01	-0.15	0.01	0.00	0.16
RA2	0.10	-0.06	0.12	-0.10	0.00	0.67	0.01	-0.21	-0.02	0.07	0.11
RA3	0.16	-0.14	-0.05	-0.10	0.03	0.89	0.05	-0.22	0.05	0.08	0.16
RA4	0.06	-0.04	-0.01	-0.09	0.03	0.67	-0.02	-0.24	0.01	-0.02	0.09
TMS1	0.18	0.28	0.15	0.06	-0.03	0.09	0.72	0.08	0.40	0.16	0.19
TMS2	0.16	0.20	0.08	0.02	-0.08	0.11	0.71	0.11	0.37	0.12	0.14
TMS3	0.13	0.27	0.01	0.01	-0.05	0.12	0.70	0.11	0.38	0.11	0.18
TMS4	0.08	0.33	0.05	0.08	-0.08	-0.10	0.79	0.37	0.19	0.13	0.48
TO1	0.04	0.20	0.13	0.02	-0.11	-0.16	0.22	0.53	0.05	0.06	0.17
TO2	0.04	0.34	0.16	0.21	-0.05	-0.22	0.23	0.85	0.07	0.11	0.22
TO3	0.13	0.23	0.14	0.08	-0.11	-0.16	0.14	0.70	0.10	0.04	0.15
TO4	0.06	0.30	0.05	0.24	0.01	-0.19	0.26	0.81	-0.02	-0.01	0.24
TOP1	0.07	0.15	-0.01	0.04	0.02	0.19	0.38	-0.07	0.68	0.07	0.01
TOP2	0.11	0.29	0.06	0.02	0.06	0.05	0.33	0.07	0.87	0.10	0.13
TOP3	0.18	0.22	0.04	-0.09	-0.08	-0.04	0.29	0.08	0.75	0.11	0.05

TOP4	-0.04	0.14	0.00	-0.10	0.01	-0.16	0.08	0.06	0.60	-0.05	-0.07
TOP5	0.03	0.29	0.11	0.10	0.07	0.09	0.38	0.07	0.84	0.08	0.09
TOP8	-0.06	0.10	0.12	0.04	-0.01	-0.20	0.23	-0.05	0.51	-0.03	-0.15
TP1	0.10	0.21	-0.04	0.01	0.01	0.07	0.17	0.07	0.11	0.85	0.22
TP2	0.11	0.25	0.04	-0.06	-0.06	0.02	0.14	0.06	0.05	0.90	0.27
UEM1	0.12	0.32	0.11	0.14	-0.04	0.13	0.33	0.27	0.05	0.23	0.81
UEM2	0.14	0.17	0.03	0.11	-0.03	0.21	0.26	0.08	0.05	0.12	0.62
UEM3	0.34	0.33	0.13	-0.01	-0.16	0.12	0.40	0.23	0.04	0.27	0.82
UEM4	0.31	0.27	0.13	-0.02	-0.17	0.11	0.29	0.28	0.02	0.25	0.89
UEM5	0.24	0.32	0.13	-0.03	-0.06	0.07	0.33	0.23	0.05	0.22	0.87
UEM8	0.27	0.31	0.08	0.03	-0.04	0.24	0.37	0.21	0.07	0.23	0.81

After obtaining a better results by evaluating the outer model (measurement model), precisely the latent variables indicates satisfactory indication of validity and reliability. Next, the evaluation of structural model (inner model) has been performed to test the hypotheses of current study. Besides, the investigation of the measurement model directed to the deletion of 13 indicators out of 67. However, none of the constructs were eliminated and have sufficient numbers of indicators per construct (Hair, Sarstedt, Pieper, & Ringle, 2012).

4.9 Structural Model

In the current study, three structural model assessments have been done, which are a direct relationship model, mediation analysis model and moderating model.

4.9.1 Assessment of Significance of the Structural Model Direct Relationships

This section explains about the structural model (inner model) after the assessment of measurement model (outer model) direct relationships as highlighted by Hair et al., (2006), while, structural model deals with dependence of the relationship in the hypothesized model of the study. In PLS, structural equation modeling, it gives an inner modeling,

analysis of the direct relationship between the variables of the study also their t-values and path coefficients. As claimed by Henseler et al. (2009), the path coefficient is same like standardized beta coefficient in regression analysis. Where beta values are the coefficient of the regression and t-values are examined to decide the significance of the relationships. Following the rule of thumb by Hair et al. (2014), t – value greater than 1.64 is considered to be as significant, which is further used for making decisions on the proposed hypothesis. Firstly, the main objective of this study is to focus on model assessment with investigation of direct-relationships and secondly to examine the hypothesized relationships between the variables via inner model. In current research eighteen (18) hypothesis which have direct relationships have been tested, however, out of eighteen (18) hypotheses, thirteen (13) hypotheses were proved to be supported and only five (5) were considered not supported based on the recommended t-value. However, Figure 4.3 reveals the direct influence of every latent construct on firm performance (dependent variable).

The Figure 4.3 displays the output results generated with the help of SmartPLS 3.2.6 (Ringle et al., 2015) clearly illustrate the path p-value, t-value, coefficient value also the standard errors. Based on these standard values the hypothesis decision has been made regarding each hypothesis significance level. Although, the t-values in current research has resulting from the bootstrapping (with 5000 sampling iterations for 257 cases / observations) also recommended by Hair et al. (2013).

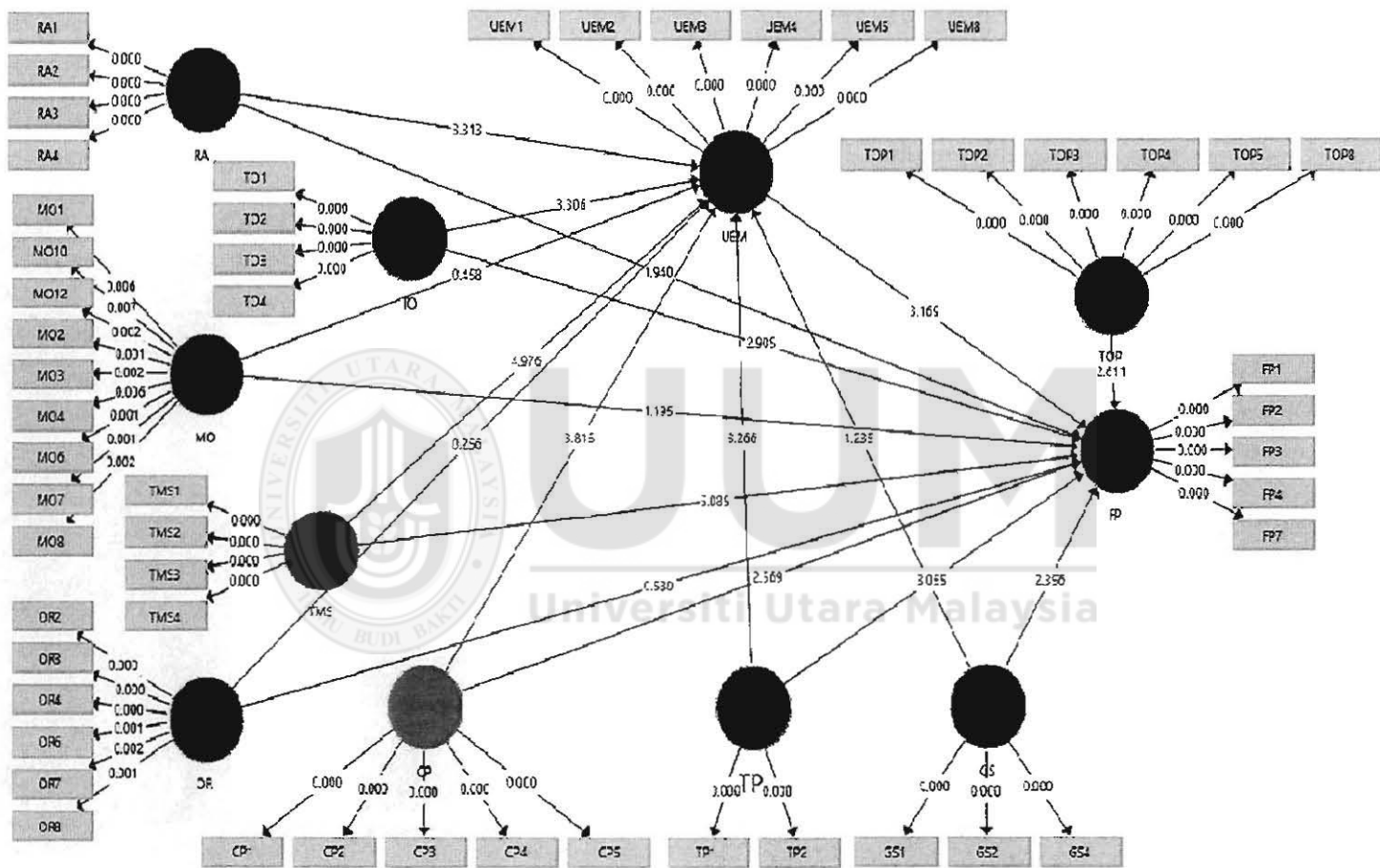


Figure 4.3
Structural Model Direct Relationships

At the outset, hypothesis 1 predicted that technology orientation is significant positively linked with performance of textile sector. Figure 4.3 demonstrates a positive significant association among technology orientation and firm performance ($\beta = 0.163$, $T = 2.905$, $p\text{-value} < 0.05$) supporting hypothesis 1.

Hypothesis 2 articulated that relative advantage is significant positively associated with performance of the firm. Figure 4.3 demonstrates a negative significant association among relative advantage and firm performance ($\beta = -0.116$, $T = 1.94$, $p\text{-value} < 0.05$) supporting hypothesis 2.

Hypothesis 3 predicted that organizational resources are positively related to firm performance. Results (Figure 4.3) demonstrate the insignificant negative relationship between organizational resources and firm performance ($\beta = -0.039$, $T = 0.530$, $p\text{-value} > 0.05$) not supporting hypothesis 3.

Similarly, Hypothesis 4 predicted that top management support is positively related to firm performance. Results (Figure 4.3) demonstrate a positive significant association among TMS and performance of the firm ($\beta = 0.303$, $T = 5.085$, $p\text{-value} < 0.05$) supporting hypothesis 4.

Further, Hypothesis 5 predicted that market orientation is significant positively related to performance of firm. Results (Figure 4.3) demonstrate an insignificant positive relationship

between market orientation and firm performance ($\beta = 0.081$, $T = 1.195$, $p\text{-value} > 0.05$) not supporting hypothesis 5.

Hypothesis 6 predicted that government support is positively related to firm performance. Results (Figure, 4.3) demonstrate a significant positive association among government support and firm performance ($\beta = 0.119$, $T = 2.356$, $p\text{-value} < 0.05$) supporting hypothesis 6.

Hypothesis 7 predicted that pressure from trading partners is significant positively associated to performance of the firm. Results (Figure, 4.3) demonstrate a significant positive association among pressure from trading partners and firm performance ($\beta = 0.160$, $T = 3.055$, $p\text{-value} < 0.05$) supporting hypothesis 7.

Hypothesis 8 predicted that competitive pressure is significant positively associated with performance of the firm. Results (Figure, 4.3) demonstrate a significant negative association among competitive pressure and performance of the firm ($\beta = -0.152$, $T = 2.569$, $p\text{-value} < 0.05$) supporting hypothesis 8.

Hypothesis 9 predicted that technology orientation is significant positively associated with use of e-marketing. Results (Figure, 4.3) demonstrate a positive significant association among technology orientation and use of e-marketing ($\beta = 0.191$, $T = 3.306$, $p\text{-value} < 0.05$) supporting hypothesis 9.

Hypothesis 10 predicted that relative advantage is significant positively associated with use of e-marketing. Results (Figure, 4.3) demonstrate a significant positive association among relative advantage and use of e-marketing ($\beta= 0.183$, $T= 3.313$, $p\text{-value}< 0.05$) supporting hypothesis 10.

Hypothesis 11 predicted that organizational resources is not associated with use of e-marketing. Results (Figure, 4.3) demonstrate an insignificant association among organizational resources and use of e-marketing ($\beta= 0.017$, $T= 0.256$, $p\text{-value}> 0.05$) not supporting hypothesis 11.

Hypothesis 12 predicted that top management support is significant positively associated with use of e-marketing. Results (Figure, 4.3) demonstrate a significant positive association among top management support and use of e-marketing ($\beta= 0.284$, $T= 4.976$, $p\text{-value}< 0.05$) supporting hypothesis 12.

Hypothesis 13 predicted that market orientation is not linked with use of e-marketing. Results (Figure, 4.3) demonstrate an insignificant association among market orientation and use of e-marketing ($\beta= 0.033$, $T= 0.458$, $p\text{-value}> 0.05$) not supporting hypothesis 13.

Hypothesis 14 predicted that government support is not linked with use of e-marketing. Results (Figure, 4.3) demonstrate an insignificant positive association among government support and use of e-marketing ($\beta= 0.063$, $T= 1.235$, $p\text{-value}> 0.05$) not supporting hypothesis 14.

Hypothesis 15 predicted that pressure from trading partners is significant positively linked with use of e-marketing. Results (Figure, 4.3) demonstrate a significant positive association among pressure from trading partners and use of e-marketing ($\beta= 0.183$, $T= 3.266$, $p\text{-value}< 0.05$) supporting hypothesis 15.

Hypothesis 16 predicted that competitive pressure is significant positively linked with use of e-marketing. Results (Figure, 4.3) demonstrate a significant positive association among competitive pressure and use of e-marketing ($\beta= 0.196$, $T= 3.815$, $p\text{-value}< 0.05$) supporting hypothesis 16.

Hypothesis 17 predicted that use of e-marketing is positively linked with performance of the firm. Results (Figure, 4.3) demonstrate a significant positive relationship between the use of e-marketing and firm performance ($\beta= 0.179$, $T= 3.169$, $p\text{-value}< 0.05$) supporting hypothesis 17.

Hypothesis 18 predicted that technology opportunism is positively linked with performance of the firm. Results (Figure, 4.3) demonstrate a significant positive association among technology opportunism and performance of the firm ($\beta= 0.151$, $T= 2.611$, $p\text{-value}< 0.05$) supporting hypothesis 18.

Table 4.11
Results of hypothesis testing (Direct effects)

S#	Hypothesis	Beta Value	SD	T Value	P Value	Decision	effect size	Q2	R Sq.	R sq. Adjusted
1	CP -> FP	-0.15	0.06	2.57	0.01	Supported	0.03	0.213	0.419	0.395
2	CP -> UEM	0.20	0.05	3.81	0.00	Supported	0.04	0.187	0.321	0.299
3	GS -> FP	0.12	0.05	2.36	0.02	Supported	0.02			
4	GS -> UEM	0.06	0.05	1.24	0.22	Not supported	0.01			
5	MO -> FP	0.08	0.07	1.19	0.23	Not supported	0.01			
6	MO -> UEM	0.03	0.07	0.46	0.65	Not supported	0.00			
7	OR -> FP	-0.04	0.07	0.53	0.60	Not supported	0.00			
8	OR -> UEM	0.02	0.07	0.26	0.80	Not supported	0.00			
9	RA -> FP	-0.11	0.05	1.94	0.05	Supported	0.02			
10	RA -> UEM	0.18	0.06	3.31	0.00	Supported	0.04			
11	TMS -> FP	0.30	0.06	5.09	0.00	Supported	0.10			
12	TMS -> UEM	0.28	0.06	4.98	0.00	Supported	0.10			
13	TO -> FP	0.16	0.06	2.90	0.00	Supported	0.03			
14	TO -> UEM	0.19	0.06	3.31	0.00	Supported	0.04			
15	TOP -> FP	0.15	0.06	2.61	0.01	Supported	0.03			
16	TP -> FP	0.16	0.05	3.05	0.00	Supported	0.04			
17	TP -> UEM	0.18	0.06	3.27	0.00	Supported	0.05			
18	UEM -> FP	0.18	0.06	3.17	0.00	Supported	0.04			

The Table 4.11 indicates that those hypothesis which were supported in this current research have a p-value of less than 0.05 and on the other side those hypothesis which were not supported in current research have a p-value greater than 0.05. Figure 4.3 is completely explained in Table 4.11 that illustrate the influence of the variables on performance of textile sector in Pakistan (dependent variable). The R-square value resulted from the PLS output indicates that all the variables together influences 42% of the changes in independent variable.

4.10 Assessment of effect size (f-squared)

Effect size signifies “the relative effect of a specific independent latent variable on dependent latent variable by indicating changes in the R-squared” (Chin, 1998). It increases the effect in R-squared of the latent constructs through which the path was linked relative to the latent constructs percentage of unexplained variance (Chin, 1998). Therefore, the

effect size might be showed using below formula (Selya, Rose, Dierker, Hedeker, & Mermelstein, 2012; Cohen, 1988);

$$\text{Effect size: } f^2 = \frac{R^2_{Included} - R^2_{Excluded}}{1 - R^2_{Included}}$$

Cohen (1988) “explains f^2 values of 0.02, 0.15 and 0.35 as having weak, moderate, strong effects respectively”. Table 4.11 explains the specific effect size of the latent constructs of the structural model.

As explained in Table 4.11, the effect size for technology orientation, relative advantage, organizational resources, top management support, market orientation, competitive pressure, government support, pressure from trading partners, use of e-marketing, technology opportunism on firm performance, were 0.035, 0.016, 0.002, 0.103, 0.010, 0.026, 0.023, 0.040, 0.036 and 0.032 respectively. Thus, following Cohen’s (1988) guideline, the effect sizes of these ten independent latent constructs on performance of the firm can be seen as small accordingly. Chin et al. (2003) highlighted that even the tiniest strength of f^2 influence is considered since they could influence firm performance by their own method.

4.11 Mediation Analysis

According Hair et al. (2014), mediation test was done mainly to know whether mediating variable enhance the effect of the independent construct to the dependent construct. There are several techniques that have been used for mediation test such as Baron and Kenny

(e.g. Baron & Kenny, 1986), sobel test (e.g. Sobel, 1982) and bootstrapping (e.g. Preacher & Hayes, 2004; Hayes, 2009). So, in this research, “re-sampling mediation technique (bootstrapping) was used by researchers to test the indirect effect of each potential variable”. Similarly, most of the studies shown that bootstrapping is a “non-parametric re-sampling procedure” which is receiving high response from researcher’s perspective because this is considered as one of the utmost rigorous and influential procedure for analyzing the mediation effect (Zhao et al., 2010; Hayes, 2009).

Moreover, this mediation analysis through bootstrapping is much appropriate in PLS-SEM since it was applied on small sample size as well (Hair et al., 2014). Also, when doing the mediating effect, one must follow the procedure given by Preacher and Hayes (2004, 2008) and bootstrap the sampling distribution of the indirect effects that work for simple and multiple models. Firstly, in this study, this method is used to determine the path coefficients by running the PLS algorithm, secondly, bootstrapping has been performed to get the t-values for determining the direct association among independent constructs and the dependent construct before testing the mediation effect. This research has examined the influence of mediating variable with SmartPLS 3.2.6 suggested by Ringle et al. (2015) by using the bootstrapping with resample of 5000 and model showed the t-values.

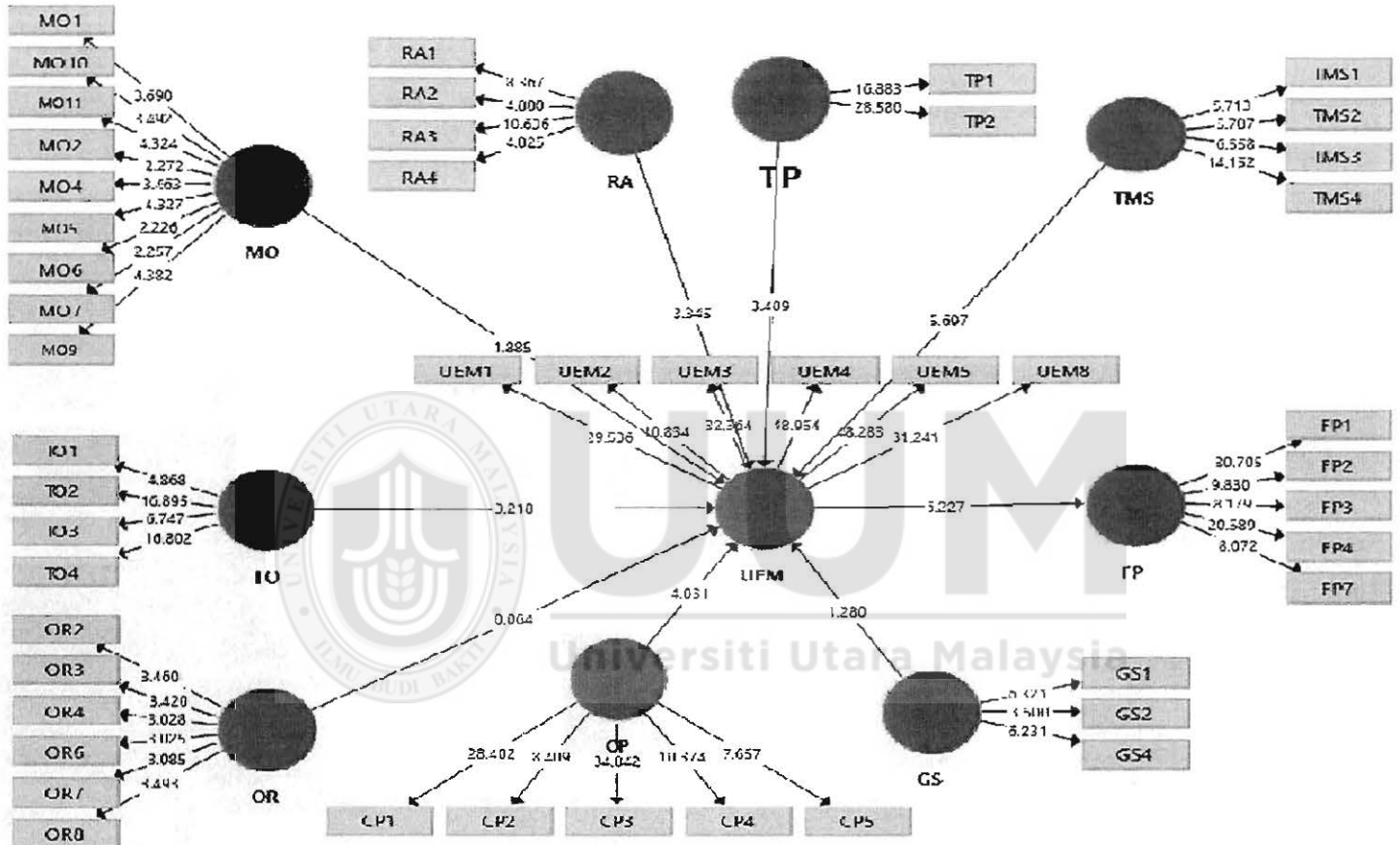


Figure 4.4
The Indirect Effect of UEM

After getting the 5000 bootstrap direct effects, next researcher has performed bootstrap indirect effects by taking the product of each indirect effect (Hayes & Preacher, 2010). Furthermore, from the evaluation of structural model of current research, it has revealed that out of eight study constructs included in the mediation structural model, six variables were found significant in mediation test. As results indicated, exogenous variables, including relative advantage (RA), top management support (TMS), technology orientation (TO), market orientation (MO), pressure from trading partners (TP) and competitive pressure (CP) were significantly related to the use of e-marketing and firm performance. The Table 4.12 shows the result of the mediation effect of the use of e-marketing on the relationships between independent variable and dependent variable.

Table 4.12
Test of mediation of use of e-marketing

Hyp. No	Hypothesis	Beta Value	SD	T Stat	P Value	5.0%	95 %	Results
Hypo 19	TO -> UEM> FP	0.064	0.024	2.620	0.004	0.030	0.110	Mediation
Hypo 20	RA -> UEM> FP	0.066	0.020	3.269	0.001	0.038	0.102	Mediation
Hypo 21	OR -> UEM> FP	0.002	0.024	0.063	0.475	-0.041	0.038	No Mediation
Hypo 22	TMS -> UEM> FP	0.108	0.032	3.373	0.000	0.064	0.169	Mediation
Hypo 23	MO -> UEM> FP	0.037	0.020	1.826	0.034	0.013	0.075	Mediation
Hypo 24	GS -> UEM> FP	0.023	0.019	1.216	0.112	-0.005	0.057	No Mediation
Hypo 25	TP -> UEM> FP	0.067	0.024	2.822	0.002	0.031	0.109	Mediation
Hypo 26	CP -> UEM> FP	0.073	0.019	3.743	0.000	0.040	0.103	Mediation

Table 4.12 shows the results of mediation of use of e-marketing (UEM) in relationship with independent and dependent variable, however, six (6) hypothesis out of eight (8) hypotheses found mediation supported. Further explained that relative advantage (RA)

found the t-value of 3.27, top management support (TMS) with t-value of 3.37, technology orientation (TO) with t-value of 2.62, pressure from trading partner (TP) with t-value of 2.82, market orientation (MO) with t-value of 1.83 and competitive pressure (CP) with t-value of 3.74, these indicated mediation and significant except government support (GS) with t-value of 1.22, and organizational resources (OR) with t-value of 0.06 that resulted insignificant and weak after including use of e-marketing as mediator with firm performance.

4.12 Mediated-Moderation Analysis

A test of moderation, as illustrated by Ramaya et al. (2011) that whatever the moderator variable is selected for this research affects the strength of association among the independent and dependent variable. He further explained that moderator variable (s) are typically introduced when there is inconsistent relationship or weak association among the dependent variable and independent 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).

However, as this study is concerned, the researcher has employed SmartPLS 3.2.6 (Ringle et al., 2015) by introducing the interaction term in the model. This model is called main

effect model and the R-square will be noted before introducing the interaction term. This study used the test of the moderating effecting approach by applying the moderating variables as an additional construct using the cross product of the indicator of the predictor variable and the moderator (Chin et al., 2003). This method of testing is called a product indicator approach. Subsequently, this model included the moderating effect of technological opportunism on the relationship between the use of e-marketing and firm performance.

Furthermore, the model tested the hypotheses simultaneously. This product indicator approach is done by first determining the path coefficients and t-values. In moderation analysis R-square change become an important issue. In current research, introducing technological opportunism supposed by the respondents of survey in SmartPLS 3.2.6 needs to create a direct relationship among moderating variable (i.e., technological opportunism) and the outcome variable (firm performance). Based on this fact, moderating effect and also the direct effects has been calculated to progress this research.

Therefore, to analyze the moderating effect, the researcher run PLS algorithm to get the beta coefficient values which was 0.149 for the technological opportunism (TOP) related to use of e-marketing (UEM) and firm performance (FP). However, to obtain the t-values the researcher run bootstrapping, after bootstrapping the results in Table 4.13 deals with the moderating effect of technology opportunism (TO) in predicting the firm performance. The results shown in Table 4.13 support hypothesis 27, which demonstrate that technology

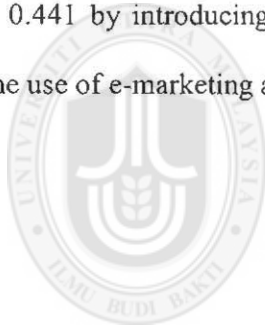
opportunity moderates the association among the use of e-marketing and performance of the firm ($\beta = 0.149$, $T = 3.36$, $p\text{-value} < 0.05$). Therefore, hypothesis 27 has been supported.

Table 4.13
Moderator Hypothesis Testing

No.	Hypothesized Path	Path coefficient	Standard Error (STERR)	T Value	P Value	Decision
1	UEM * TOP -> FP	0.149	0.044	3.361	0.001	Supported

Source: The Researcher

Consequently, the R square value of the firm performance constructs were increased from 0.419 to 0.441 by introducing the technological opportunity as a moderating variable among the use of e-marketing and firm performance as shown in the figure 4.5.



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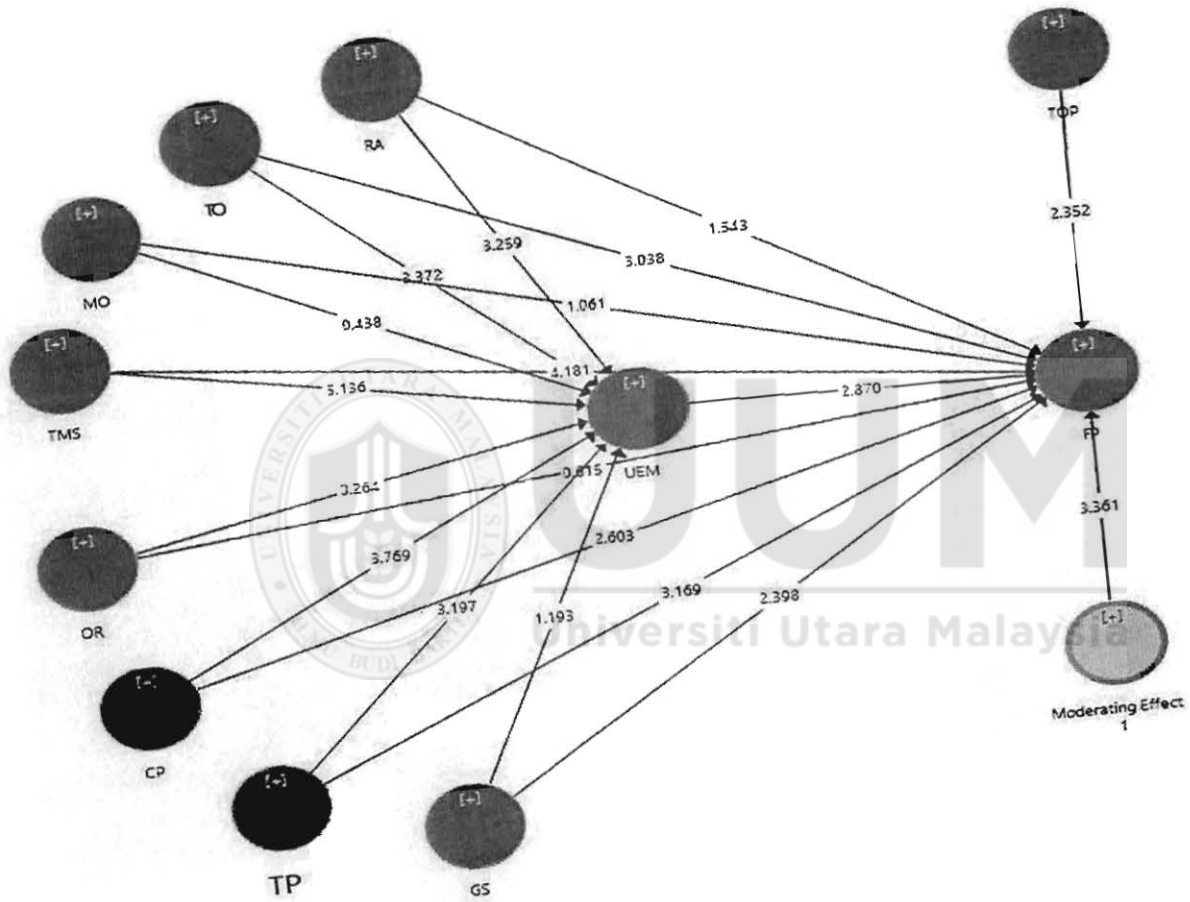


Figure 4.5
Structural Model with Moderating Variable

Information received from path coefficients was utilized to plot the moderation effect of technological opportunism on the relationship between use of e-marketing and performance of the firm by following the suggested techniques of Aiken and West (1991), Dawson, (2014). Figure 4.6 indicates about relationship between use of e-marketing and firm performance is relatively positive and strong for organizations with high technological opportunism in their business strategies.

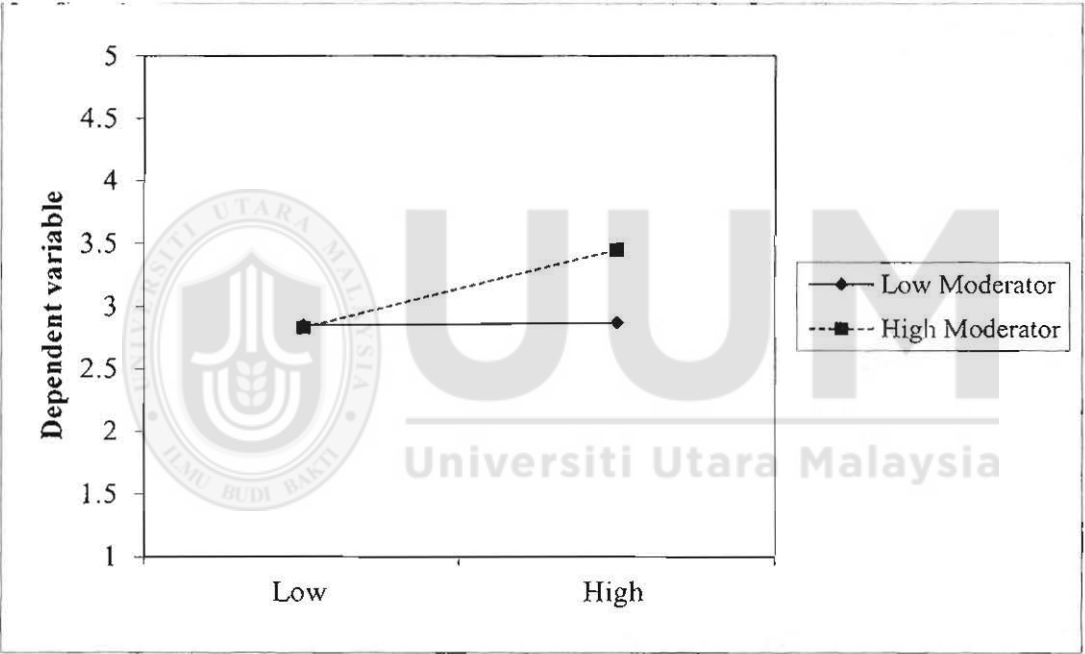


Figure 4.6
Interaction of technological opportunism between use of e-marketing and firm performance

Moreover, to determine the strength of moderating effect, the current study used Cohen's (1988) guidelines. Also, strength of moderating effect could be examined by comparing the R-square value main effects model with an R-square value of full model which includes both moderating variables and exogenous latent variables (Henseler & Fassott, 2010).

As discussed earlier in this study, the R square value of the firm performance constructs was increased from 0.419 to 0.441, after introducing the technological opportunism as a moderating variable between the relationship of the use of e-marketing and firm performance. The R square change is 0.0220 which indicates that the addition of one (1) interaction term, the R square changed about 2.2 % that is additional variance as stated in Table 4.14.

Table 4.14
Effect size of (f^2) moderating variables

R-squared	Included	Excluded	f-squared	Effect size
Moderators	0.419	0.441	0.0220	Small

4.13 Assessment of Predictive Relevance of the Model

Current research employed the blindfolding procedure to examine the predictive relevance of the overall model. The blindfolding procedure was accomplished to evaluate the predictive capability of the model (Geisser, 1974; Stone, 1974). The predictive relevance could be evaluated by using Stone–Geisser criterion, which undertakes that a structural model (inner model) should provide confirmation of prediction of the ‘endogenous latent construct’s’ indicators (Henseler et al., 2009). Predictive relevance is represented by Q2. Q value was attained by doing the blindfolding in SmartPLS to evaluate the parameters estimates and also measure the values in which they are working around the model (Hair et al., 2014). The outcomes were seen from the output of blindfolding in PLS-SEM through the construct score through which “cross validated redundancy extracted”. These cross validated redundancies analyze the ability of the model to predict the endogenous variable

and explains the quality of the model as well. The Table 4.15 exhibits the “cross validated redundancy”.

Table 4.15
Construct Cross Validated Redundancy

Total	SSO	SSE	1-SSE/SSO
FP	1285	1011	0.2134
UEM	1542	1253	0.1872

Table 4.15 explains that in column four (4), Q2 shows the predictive relevance of 0.213 for the firm performance (FP) and 0.187 for the use of e-marketing (UEM) which shows that this model have the predictive relevance. Moreover, “if Q2 value is greater than zero (0) the model have predictive relevance for the reflective endogenous latent variable” as recommended by (Hair et al., 2014).

4.14 Summary

In chapter 4, the justified reason for using PLS path modeling to test the theoretical model in this study was provided. Subsequent the assessment of significance of the path coefficients, the major findings of this study was displayed. Commonly, self-report techniques has presented significant support for the use of e-marketing (UEM) as mediating variable between the relationship of technology orientation (TO), relative advantage (RA), organizational resources (OR), top management support (TMS), market orientation (MO), government support (GS), competitive pressure (CP), pressure from trading partners (TP) and firm performance (FP). In that regard five variables indicate mediation out of eight such as competitive pressure with t-value of 3.743, relative advantage (RA) with t-value of 3.269, top management support (TMS) with t-value of

3.373, technology orientation (TO) with t-value of 2.62, pressure from trading partners (TP) with t-value of 2.822, market orientation (MO) with t-value of 1.826 which indicates mediation and significant except government support (GS), and organizational resources (OR) which become insignificant and weak after inclusion of use of e-marketing (UEM) as a mediator with firm performance (FP).

Importantly, concerning the moderating effect of technological opportunism (TOP) on the relationship between the use of e-marketing (UEM) and firm performance (FP), PLS path coefficient demonstrates that the technology opportunism has moderated the relationship between the use of e-marketing and firm performance because its path coefficient (0.149) with a t-value of (3.361) indicating p-value is less than 0.05. However, out of twenty seven (27) hypotheses, twenty (20) hypotheses have been found significant and supported in this study.

The following next chapter (Chapter 5) will talk about further the findings, followed by implications, limitations, suggestions for future research directions and conclusions. The results obtained indicate that some of the hypothesis tested in this study was supported while some others were not. Table 4.16 summarizes the results of the hypothesis tested in this study.

Table 4.16
Summary of Hypothesis

Hypothesis	Hypothesis Statement	Supported / Rejected
H1	Technology orientation, significant positive impact on the firm performance.	Supported
H2	Relative advantage significant negatively impact on the firm performance.	Supported
H3	Organizational resources significant positively impact on the firm performance.	Not Supported
H4	Top management support significant positively impact on the firm performance.	Supported
H5	Market orientation, significant positively impact on the firm performance	Not Supported
H6	Government support significant positively impact on the firm performance	Supported
H7	Pressure from trading partners significant positively impact on the firm performance	Supported
H8	Competitive pressure significantly negatively impact on the firm performance	Supported
H9	Technological orientation significantly positively associated with the use of E-Marketing	Supported
H10	Relative advantage significant positively associated with the use of E-Marketing	Supported
H11	Organizational resources significantly positively associated with the use of E-Marketing	Not Supported
H12	Top management support significantly positively associated with the use of E-Marketing	Supported
H13	Market orientation significantly positively associated with the use of E-Marketing.	Not Supported
H14	Government support significantly positively associated with Use of E-Marketing	Not Supported

H15	Pressure from trading partners significantly positively associated with the use of E-Marketing.	Supported
H16	Competitive pressure significantly positively associated with the use of E-Marketing	Supported
H17	Use of E-Marketing significant positive associated with firm performance.	Supported
H18	Technology opportunism significantly positively associated with firm performance.	Supported
H19	Use of E-Marketing significant positive mediates the relation between technology orientation and firm performance	Supported
H20	Use of E-Marketing significant positive mediates the relation between relative advantage and firm performance.	Supported
H21	Use of E-Marketing significant positive mediates the relation between organizational resources and firm performance.	Not Supported
H22	Use of E-Marketing significant positive mediates the relation between top management support and firm performance.	Supported
H23	Use of E-Marketing significant positive mediates the relation between market orientation and firm performance.	Supported
H24	Use of E-Marketing significant positive mediates the relation between government support and firm performance.	Not Supported
H25	Use of E-Marketing significant positive mediates the relation between pressure from trading partners and firm performance.	Supported
H26	Use of E-Marketing significant positive mediates the relation between competitive pressure and firm performance	Supported
H27	Technological opportunism moderates the relationship between the use of e-marketing and firm performance.	Supported

CHAPTER FIVE

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.0 Introduction

This chapter focuses on the discussion of the research findings based on the research objectives, research questions, hypotheses and the output of chapter four. Additionally, the chapter provides the theoretical and practical contributions and implications of the findings of this study. However, at the end of this chapter, it highlights the research limitations and offers direction for future research.

5.1 Recapitulation of this Study

This section will provide the highlights of the overall study aligned with the research objectives; the purpose of this study was to investigate the relationship between TOE (Technological-Organizational-Environmental) factors, and performance of textile sector in Pakistan. This study also intended to examine whether use of e-marketing mediates the relationship between all TOE factors and firm performance. Furthermore, this study also attempted to examine whether technological opportunism moderates the relationship between the use of e-marketing and textile firm's performance.

Notably, all the above objectives are based on the existing literature including theories and one model such as resource based view (RBV) theory which is consider as the underpinning theory of the study because this theory explains the relationship of current study major issue like how to achieve firm performance with mediating variable (which is

technology or innovation related) as well as organizational factors of the study and second theory that is diffusion of innovation (DOI) which is the supporting theory of the study and explains the relationship between all technological, organizational factors and uses of e-marketing, also supports the TOE framework.

Moreover, to achieve the objectives of this research, a total of twenty seven (27) hypothesis has been stated and tested accordingly, as a result of this testing, the research findings empirically supported twenty (20) hypotheses including direct, moderating and mediating (indirect) hypothesis.

In this study, quantitative data have been collected from the textile manufacturing firms operating in Pakistan, using proportionate cluster sampling technique and the respondents were general manager marketing working in the marketing department of textile firms in Pakistan. However, where general manager marketing were not available, CEO, director marketing and marketing managers were considered to respond against the questionnaire. A structured questionnaire was distributed directly to the marketing department of textile firms in various locations across Punjab and Sindh provinces in Pakistan. The response rate of the survey was approximately 58% that has been considered satisfactory for research survey.

The next section is the discussion, which gives all the results that whether the hypotheses are significant or insignificant also positively or negatively in relation. Furthermore, this

section helps to investigate, that all the objectives of the study have been fairly achieved or not, which were established at the start of this study.

5.2 Discussion

To summarize the findings of the study, this section elaborate findings and contribution of the study and will outline the relationship between technological factors: relative advantage (RA) & technology orientation (TO), organizational factors: top management support (TMS), market orientation (MO) & organizational resources (OR) and environmental factors: competitive pressure (CP), government support (GS) & pressure from trading partners (TP), these all variables helped to predict the firm performance up to some extent as well as use of e-marketing. However, relationships were empirically analyzed both directly and indirectly through intervening variables, which include mediating and moderating variables by using resource based view (RBV) and diffusion of innovation (DOI) theory with the help of TOE framework.

Based on the main objective of the study, a total of five objectives is stated and formulated according to the research questions developed from the problem statement in the chapter one. Studying these relationships has provided avenues to enhance textile sector performance or other manufacturing firm's performance in general. This framework is supported by the RBV theory, which postulates that firm performance is influenced by a firm's valuable tangible and intangible resources.

Consequently, in this study, relative advantage, technology orientation, marketing orientation, top management support, government support, competitive pressure and trading partner's pressure are the intangible resources; while organizational resources are the firm's tangible resource. Furthermore, DOI theory and TOE model has also explained all these independent variables, relationship directly with use of e-marketing and extension of framework till firm performance is a major contribution in DOI theory with combination of RBV theory to justify the relationship properly as it is also suggested by Baker (2011) that by extending the model from innovation (e-marketing) to firm performance with the help of RBV theory, will be a major contribution in the existing literature.

However, twenty seven (27) hypotheses are formulated and tested statistically based on PLS-SEM using version 3.0 as recommended by (Ringle et al., 2015). The empirical results provided support for twenty (20) hypotheses out of which thirteen (13) out of eighteen (18) is direct, six (6) out of eight (8) are meditating and one (1) out of one (1) is moderation hypotheses.

This study adds e-marketing uses and technological opportunism as new and less used constructs to examine its influence on firm performance. Investigation and examination of these study variables are anticipated to provide better understanding of the antecedent factors that influence firm performance. The discussion will specifically focus on the research objective and hypothesis posited in this study. Each hypothesis discussed separately with regard to how the findings impact textile firms' performance as well as

marketing department performance. Furthermore, discussion section presents the findings based on the objectives of the study as followed.

5.3 Objective 1: Direct Relationship between TO, RA, OR, TMS, MO, GS, TP, CP and firm performance (FP)

The first objective of the study is to examine whether technological factors (technology orientation, relative advantage), organizational factors (organizational resources, top management support and market orientation) and environmental factors (government support, pressure from trading partners and competitive pressure) have influence on firm performance particularly in the textile sector of Pakistan. This objective formulated eight hypotheses on the positive relationship between technology orientation (TO) and firm performance (FP); relative advantage (RA) and firm performance (FP); organizational resources (OR) and firm performance (FP); top management support (TMS) and firm performance (FP); market orientation (MO) and firm performance (FP); government support (GS) and firm performance (FP); pressure from trading partners (TP) and firm performance (FP) and competitive pressure (CP) and firm performance (FP). Specifically, H1, H2, H3, H4, H5, H6, H7 and H8 were tested to achieve the objective.

5.3.1 Technology Orientation (TO) and Firm Performance (FP)

Therefore, to achieve the stated objective of this study, H1 was tested, which states that technology orientation (TO) positively relate to firm performance. In this study, TO refers to a firm disposition to bring together or use new technologies, products or innovations to develop and improve products and services. The result shows another important finding

that there is a positive significant relationship between TO and firm performance ($\beta= 0.163$, $T= 2.905$, $p\text{-value}< 0.05$). Therefore, this result substantiates the empirical linkage between TO and firm performance. Hence, H1 is supported. In accordance with the result of this study, previous studies have demonstrated that technology orientation (TO) positively influence firm performance (Gao *et al.*, 2007; Gatignon & Xuereb, 1997; Hakala, 2011; Hoq, 2009; Hsu *et al.*, 2014; Mu & Di Benedetto, 2011; Paladino, 2007; Salavou, 2010; Spanjol *et al.*, 2011; Weinzimmer *et al.*, 2012). This finding further supports the notion of the RBV that “sustained competitive advantage is derived from the summation of strategically important resources”.

The suggestion of this finding is that textile firms that focus on TO and consider it among the main business strategies to create quality products and services, are more likely to perform better. As such, this information is helpful to textile sector in adopting new technologies as a response to taking advantage of the customers before their rivals. However, in the context of Pakistan, (Ahmed, 2012; Khan, 2010; Shah, Warraich, & Kabeer, 2012), argued that the technology orientated firms invest heavily in modern technology and become more creative and innovative to compete in the market. Hence, it has been proved on the basis of current study findings and also with the help of previous literatures that technology orientation is one of the sturdiest and the imperative predictor of firm performance and particularly in the textile sector of Pakistan.

5.3.2 Relative Advantage (RA) and Firm Performance (FP)

Secondly, H2 hypothesized that relative advantage (RA) is positively related to firm performance. It is important to remember that RA is defined as the concept which refers to “the degree to which an innovation is perceived to be better than the idea it supersedes” (Rogers, 1995). Therefore, relative advantage (RA) has been observed as an important mechanism that directly influences the performance of textile firms. Moreover, the current study has scrutinized the effect of relative advantage on firm performance and findings showed that relative advantage has a significant but negative effect on the performance of textile firms ($\beta = -0.116$, $T = 1.94$, $p\text{-value} < 0.05$). This implies that when a firm perceives bringing new strategies in the firm without any proper research and development will lower the performance of the firm particularly in the textile sector of Pakistan. Thus, it can be argued that firms who prefer the traditional way of doing business will less preferably bring new strategies in the firms which ultimately lowers the firm performance.

The current findings in line with a few of the previous studies have found that the relative advantage has a significant, but negative relationship with firm performance (Wang, Wang and Yang, 2010; Low, Chen and Wu, 2011). In the textile manufacturing setting, researchers argued that relative advantage plays an important role in the effectiveness of firm performance especially in the context of Pakistan textile industry. Thus, the current study concluded that relative advantage is a meaningful and important predictor of firm performance, particularly in the context of textile industry in Pakistan.

5.3.3 Organizational Resources (OR) and Firm Performance (FP)

OR is defined by Barney (1991) as; “firm resources include all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement the strategies that improves its efficiency and effectiveness”. H3 hypothesized that OR is positively related to firm performance, but unfortunately in the current study, OR and FP ($\beta = -0.039$, $T = 0.530$, $p\text{-value} > 0.05$) relationship has found insignificant. This empirical results coincide with the findings of previous studies that argue OR has no relationship or an insignificant relationship with firm performance (Inmyxai and Takahashi, 2009; Uz Kurt et al., 2013). As the finding rejected the hypothesis and provides the answer to the respective research question. In general, the result provides no support for the assertion of the RBV as a theory on OR due to lack of influence on the performance of the firm.

5.3.4 Top Management Support (TMS) and Firm Performance (FP)

Moreover, H4 hypothesized that TMS is positively related to firm performance was tested. Based on the literature the extent to which CEOs impact the firm performance is considerably important to scholarly understanding of, how organizations operate; until now, this relation is poorly implicit. Previous empirical studies in order to examine the relationship among CEOs and firm performance used adjustments, though challenging, however, suffer from methodological problems, which systematically reduces the relative influence of CEOs on the performance of the firm as a contrast to industry and firm effects. However, in this current study the findings have supported the respective hypothesis that TMS and FP ($\beta = 0.303$, $T = 5.085$, $p\text{-value} < 0.05$) is positively related with each other.

Therefore, TMS has observed as an important mechanism that directly influence the performance of textile firms. Moreover, the current study has scrutinized the effect of TMS on the firm performance and findings showed that TMS has a significant, positive effect on the performance of the textile firms.

Therefore, 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, particularly in the textile sector of Pakistan, where textile business are normally owned by the families or a single ownership (Carpenter, Geletkanycz and Sanders, 2004; Varukolu, 2007).

The current findings in line with a few of the previous studies have found that the TMS has a significant positive relationship with firm performance (Al-qirim, 2007; Duan et al., 2012; El-Gohary, 2012; Li, 2008; Molla & Licker, 2005; Prasad et al., 2001; Premkumar & Roberts, 1999; Wang et al., 2010). In the textile manufacturing setting, researchers argued that TMS plays an important role in the effectiveness of firm performance, especially in the context of Pakistan textile industry. Thus, the current study concluded that TMS is considered as a vital variable to predict firm performance as particularly in the context of textile industry in Pakistan. Majority of the textile business has run by the families or member of the family who are operating since long. Entry for new entrepreneurs

is sometime difficult or cannot help to survive for long due to government policies, investments issue, tax problems and many other related problems. However, apart from this side, top management is a final decision maker in the industry of Pakistan and plays a complementary role in any decision of the firm.

5.3.5 Market Orientation (MO) and Firm Performance (FP)

Moreover, H5 hypothesized that MO positively related to firm performance. It is important to remember that MO is defined as “the enterprise’s philosophy that centers on customer satisfaction through the activities of customer orientation, competitor orientation and inter-functional coordination”. However, opposing to expected results, the finding of this hypothesis was not supported; therefore, it revealed that MO does not influence the firm performance ($\beta= 0.081$, $T= 1.195$, $p\text{-value} > 0.05$). Although, this result does not support some previous studies (Alam, 2010; Farrell & Oczkowski, 2002; Farrell, 2000; Idar & Mahmood, 2011; Long, 2013; Mahmoud & Yusif, 2012; Wang et al., 2012), it is consistent with those who found no relationship between MO and firm performance (Farrell et al., 2008; Ferraresi et al., 2012; Hsu et al., 2014; Keskin, 2006; Laukkanen et al., 2013; Polat & Mutlu, 2012; Suliyanto & Rahab, 2012).

However, considering the arguments and findings contending that MO influences business performance, this could demonstrate a number of explanations responsible for this finding. A possible explanation for this finding may be based on the assertion that MO, as an organizational factor, is contextually sensitive (Diamantopoulos & Hart, 1993; Ellis, 2006). For instance, in a traditional, relatively low-industrialized country, the products, processes

and business system are not integrated with one another, and therefore, MO may not be considered important.

Additionally, it might consider a fact that MO reflects the process through which firm's continual study their customers' needs and competitor actions in order to have more understanding; and meeting consumer needs are not considered vital by the textile firm's owner-managers. Another reason for this supposition not to hold may be related to methodological differences, such as the lack of mediating constructs, since the hypothesis is a direct relationship which can be seen in the mediation result. Nonetheless, this does not imply that MO is not fundamental for firm performance. In this study, MO has an indirect relationship with firm performance through the use of e-marketing.

5.3.6 Government Support (GS) and Firm Performance (FP)

Furthermore, this objective was also achieved by testing H6 which states that GS is positively related to firm performance. It is worthy to note that GS is viewed as the main source of motivation for the firms in terms of tax rebates, law and order, international trade and relationships, country image, employment level and labor rights etc. However, in case of agro-based industry, for instance textile industry of Pakistan, the government is directly involved in the rebates and fixation of cotton prices through a ministry of textile which is a government department, therefore, to attain the competitive advantage and improved performance, there is a mandatory need for a government support to overcome such issues.

Nevertheless, based on the regression result in this study, GS is found to be positively related to firm performance ($\beta = 0.119$, $T = 2.356$, $p\text{-value} < 0.05$); thus, H6 is supported. The findings observed in this study mirror those of the previous studies that have reported positive effects of GS on firm performance (Lau and Tong, 2008; Kang and Park, 2012; Shah, Warraich and Kabeer, 2012; Shaher, 2012). Also, this result provides support for theoretical explanations of firm performance based on firms' valuable resources as postulated by the RBV. The RBV explains that the increasing rate of change has put increasing pressure on firms to react more quickly, as time is often seen as a source of competitive advantage that is why, with respect to GS, firms should change themselves according to the external environment and make their strategies more compatible with government policies and regulations.

Lastly, the RBV literature suggests by developing dynamic capabilities, for example, a firm is able to adapt to changing industry conditions and government regulation, therefore, the firms learn and exploit new knowledge and articulate an innovative response to previously nonexistent market demand.

5.3.7 Pressure from Trading Partners (TP) and Firm Performance (FP)

To achieve the stated objective of this study, H7 was tested, which states that pressure from TP is positively related to firm performance, trading partner plays an important role in sharing information between the firms and this sharing of information plays an essential role in increasing the firm performance and lead the firms towards cost effectiveness (Porterfield, 2008). The result shows another important finding that there is a positive

significant relationship between pressure from TP and firm performance ($\beta = 0.160$, $T = 3.055$, $p\text{-value} < 0.05$). Therefore, this result substantiates the empirical linkage between pressure from TP and firm performance. Hence, H7 is supported. In accordance with the result of this study, previous studies have demonstrated that TP positively influences firm performance (Calis, Douglas and Nijssen, 1999; Ke and Wei, 2007; Porterfield, 2008; Ahmad, Bakar, et al., 2014).

This finding further supports the notion of the RBV that sustained competitive advantage is derived when firms start moving and derived their strategies in accepting the change to their internal process by the pressure received from the external environment. However, the suggestion of this finding is that textile firms that focus on TP and make it among the main business streamline and in the development of new strategies according to the suggestions of their trading partners, such firms are more likely to perform better. Furthermore, the findings implies that few companies have a selection procedure of trading partners for sharing of information and particularly the firms who are involved in imports or exports of the products like textile industry of Pakistan as they are continuously involved in the international trade, therefore, they are more concerned about their trading partners and depends on informal and personal contacts for information.

Hence, it has been proved on the basis of current study findings and also with the help of previous literatures that pressure from trading partners is one of the strongest and the imperative predictor of firm performance particularly in the textile sector of Pakistan.

5.3.8 Competitive Pressure (CP) and Firm Performance (FP)

Lastly, the last hypothesis of first objective was also achieved by testing H8 which states that CP is positively related to firm performance. It is worthy to note that if there is a dominant player in the market, who are enjoying a lot of power, only then, they can force other weaker players to follow their benchmark. However, based on the regression result in this study, CP is found significant, but negatively related to firm performance ($\beta = -0.152$, $T = 2.569$, $p\text{-value} < 0.05$); thus, H8 is supported but with the negative relationship. The findings observed in this study mirror those of the previous studies that have reported negative effects of CP on firm performance (Warzynski, 2005; Lau and Tong, 2008; Kang and Park, 2012; Shah, Warraich and Kabeer, 2012; Shaher, 2012; Rahayu and Day, 2015).

Therefore, esteem to competitive pressure in textile industry of Pakistan, the negative relationship of the findings clearly highlights that when competition in textile industry decreases or there are less number of players in the market, the textile performance may increase. In support of this statement, textile industry is the major contribution in the GDP of Pakistan and bring foreign currency in the state, however, in case of high competition in global markets, the Pakistan textile industry is still competing with local competitors, if there is low competition in local industry, then there is a chance for the textile firm to get more chances to reach global customers and sell their textile related products without facing any severe competition that will ultimately increase the revenues of the firm and might influence the firm performance effectively. Although, another main justification for study finding is that less players in the market will give more share to small players as well, which helps them to survive in the market even with less capital, moreover, the large or

small firms will also achieve the economies of scale due to high production and high product demand just because of less competition. So from an organizational point of view, it can be concluded that lesser the competition, the higher is the firm performance.

5.4 Direct Relationship between TO, RA, TMS, MO, OR, CP, TP, GS and Use of E-Marketing (UEM)

The second main objective of the study is to examine whether technological factors (technology orientation, relative advantage), organizational factors (organizational resources, top management support and market orientation) and environmental factors (government support, pressure from trading partners and competitive pressure) have an influence on the use of e-marketing particularly in the textile sector of Pakistan. However, building on the RBV, DOI theory and TOE framework, this objective formulated eight hypotheses on the positive relationship between technology orientation (TO) and use of e-marketing (UEM); relative advantage (RA) and use of e-marketing (UEM); organizational resources (OR) and use of e-marketing (UEM); top management support (TMS) and use of e-marketing (UEM); market orientation (MO) and use of e-marketing (UEM); government support (GS) and use of e-marketing (UEM); pressure from trading partners (TP) and use of e-marketing (UEM) and competitive pressure (CP) and use of e-marketing (UEM). Specifically, H9, H10, H11, H12, H13, H14, H15 and H16 were tested to achieve the objective.

5.4.1 Technology Orientation (TO) and Use of E-Marketing (UEM)

Firstly, the aforementioned objective resulted in H9, which states that there is a positive relationship between technology orientation (TO) and use of e-marketing (UEM) in textile firms of Pakistan. Interestingly, the result of the regression analysis used to test this hypothesis shows that there is a positive relationship between TO and use of e-marketing ($\beta=0.191$, $T=3.306$, $p\text{-value}<0.05$). This finding also concurs with the view of past studies (Raji Srinivasan, Lilien and Rangaswamy, 2002; Brady, Fellenz and Brookes, 2008; Trainor et al., 2011; Sürer and Mutlu, 2015) that technological orientation signifies a firm's execution and usage of a specific set of electronic marketing technologies, which can enable rich communication and interactions between seller and buyers. Based on this result, it is clear that TO, as a firm's valuable resource, can help in implementation and usage of e-marketing.

So it implies that technology orientation is a core predictor in the use of E-Marketing technologies towards internationalization because it represents the usage and implementation of e-marketing technologies by diversified firms to interact with their customers and to make a sound dialog with them in order to generate more revenues. Therefore, this finding provides evidence that TO plays an important role in the use of e-marketing by textile firms in Pakistan also supported by TOE framework consistent with DOI theory.

5.4.2 Relative Advantage (RA) and Use of E-Marketing (UEM)

Secondly aforementioned objective resulted in H10, which states that there is a positive relationship between RA and the use of e-marketing in textile sector of Pakistan. The empirical findings revealed that there is a significant positive relationship between RA and the use of e-marketing. Therefore, in line with the stated hypothesis, the current study has found support for a positive relationship between RA and the use of e-marketing ($\beta = 0.183$, $T = 3.313$, $p\text{-value} < 0.05$). This implies that RA in technology usage is considered as the most significant factor for information and technology growth in the firms. Furthermore, it was verified by Rahayu and Day (2015) that greater managerial understanding of the RA of e-commerce uses, increases the chances of that firm in allocation of several resources for instance; financial resources, managerial resources, and technological resource to use e-marketing in the organization.

The findings of the current study concurrent with previous studies where the researcher argued that RA is significantly positively related to use of e-marketing. The literature also indicated that RA is the only variable that has been constantly recognized as a critical factor for technology adoption, however, several studies also explained the importance of adoption factor (Chong et al., 2009; Oliveira and Martins, 2011; Rahim, Bakar and Ahmed, 2015).

RA has also been abstracted as a perceived benefit by several researchers where a perceived benefit is known “as the level of recognition of the relative advantage that the particular technology could provide to the organization”. Therefore, in current study relative

advantage plays a vital role in supporting the organizations to gain perceived benefits after using the e-marketing technology in their particular textile firms. However, this is also in line with the argument of Tornatzky and Klein (1982) identified that Rogers' characteristic of RA is the only variable that has been constantly recognized as a critical factor for technology adoption, moreover, this statement is also supported by the diffusion of innovation theory (DOI) by Rogers (1995) where RA is considered as the characteristics of innovation which ultimately influence the top management or marketing managers' decision making for using the innovation or new technology which is e-marketing in their firms.

5.4.3 Organizational Resources (OR) and Use of E-Marketing (UEM)

Another hypothesis formulated based on the above objective is H11, which states that there is a positive relationship between OR and use of e-marketing in textile sector of Pakistan. The empirical finding did not provide any support for H11 as the regression result suggests that there is an insignificant or no relationship between OR and UEM ($\beta = 0.017$, $T = 0.256$, $p\text{-value} > 0.05$). As the findings of this hypothesis are also concurrent with the previous studies held by Hameed, Counsell and Swift (2012). The finding implies that organizational resources are not linked with the use or adoption of e-marketing, one of the main reason is that e-marketing is a technique or a process which can be implemented with very little cost and there is no such assets or big investments are required to implement this technique and is manageable with the existing resources of the firms.

However, due to the limitation of the usage of e-marketing, it can be used only by the marketing department who already have the computer systems and the available resources to connect to the internet, so drawing the conclusion, organizational resources cannot influence the use of e-marketing in current study context. Drawing upon the notion of the RBV and DOI theory, this study contradicts with the explanation's, however, considering the contextual factors influence, therefore, implementation of e-marketing does not need any extra resources for adoption and implementation.

To sum up, as textile firms focus more on OR, the use of e-marketing cannot be effected, hence, this study indicates that textile firms cannot think more about OR while adopting the new technology like e-marketing as it is very less expensive technique with huge benefits, so e-marketing may normally regulate by using the current resources rather buying any technical devices or resources.

5.4.4 Top Management Support (TMS) and Use of E-Marketing (UEM)

H12 was also formulated to achieve the subjected objective. Thus, the hypothesis states that there is positive relationship between TMS and the use of e-marketing. However, as expected, the results provide empirical support that there is a significant positive relationship between TMS and the use of e-marketing ($\beta = 0.284$, $T = 4.976$, $p\text{-value} < 0.05$). This finding is similar to the conclusion of previous findings that top management support is the most important predictor of technology, which plays a major role in the acceptance, diffusion and innovation of technology (Powell and Dent-Micallef, 1997; Prasad, Ramainurthy and Naidu, 2001; Srinivasan, Lilien and Rangaswamy, 2002; Wu, Mahajan

and Balasubramanian, 2003; Molla and Licker, 2005; Al-Qirim, 2007; Li, 2008; Wang, Wang and Yang, 2010; Duan, Deng and Corbitt, 2012; El Gohary, 2012; Ahmad *et al.*, 2014).

It implies that 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.

5.4.5 Market Orientation (MO) and Use of E-Marketing (UEM)

In regard to the stated objective, H13 was articulated to explain that there is a positive relationship between MO and the use of e-marketing in the textile sector of Pakistan. Unfortunately, the result of the regression analysis used to test this hypothesis shows that there is an insignificant or no relationship between MO and the use of e-marketing ($\beta=0.033$, $T=0.458$, $p\text{-value}>0.05$). In line with this finding, very few studies have shown the insignificant relationship between MO and UEM, one of them is by (Han, Kim, & Srivastava, 1998).

The empirical findings of this study enhance the vision of the researcher by exploring the new aspects regarding the relationship between MO and UEM. The result implies that in textile sector of Pakistan, the less number of firms is using the proper technology in their overall process and they are still working on a traditional way of doing marketing and preferring the same system to follow on rather using e-marketing technology for marketing purpose. Nowadays, textile firms are using only email and telephonic conversation to communicate with the customers, which is identified as a very old technique and needs lots of amendments (Abrar *et al.*, 2008; Sheikh, Shahzad and Ishak, 2016). Therefore, it clearly exemplifies that market oriented firms are focusing on the same traditional ways of doing marketing and does not willing to acquire any technology to communicate with their customers, vendors and competitors.

5.4.6 Government Support (GS) and Use of E-Marketing (UEM)

H13 was stated to achieve the second objective of the study, which explains that there is a positive relationship between GS and use of e-marketing in the textile sector of Pakistan. Unfortunately, the result of current study indicated that government support does not influence the use of e-marketing ($\beta = 0.063$, $T = 1.235$, $p\text{-value} > 0.05$). Hence, there are few studies supporting the findings of this study, which highlights that government support is insignificantly related to use of e-marketing (Seyal *et al.*, 2004; Thatcher, Foster and Zhu, 2006; Al-Hudhaif and Alkubeyyer, 2011; Rahayu and Day, 2015; Ueasangkomsate, 2015).

The findings imply that government of Pakistan is not much concern about the technology implementation in the organizations as many firms are submitting their taxes, registration

charges, electricity bills, gas bills, land rents, water charges and other expenses through a manual way. This is the reason while, many government departments and offices are still using the manual filing systems for their offices and there is no such electronic way of data entries or contacting with users or customers. However, government officers working in different departments are reluctant to adopt new technology because they consider the manual system friendlier and hide their mistakes and errors easily. Apart from this side, organizations are still unwilling to implement any technology because the government systems are not supportive in this regard. Hence, concurrent with findings, GS has found insignificant with use of e-marketing.

5.4.7 Pressure from Trading Partners (TP) and Use of E-Marketing (UEM)

Another important hypothesis (H15) of the current study have formulated to find the positive relationship between pressure from TP and UEM. Consistent to the hypotheses, the empirical findings of current study concludes that the pressure from TP had a significant and a positive effect on the use of e-marketing ($\beta= 0.183$, $T= 3.266$, $p\text{-value}< 0.05$) in the textile sector of Pakistan. This implies that when the textile firms receive higher pressure from their trading partners regarding using of certain technology for communication purpose that will motivate the firms to use that new technology for instance e-marketing. The findings of the current study also concurrent with previous studies where the researcher argued that pressure form TP is significant positive related to use of e-marketing (Kuan and Chau, 2001; Morais, 2006; Ahmad, Bakar, *et al.*, 2014). In line with the statement, the findings indicated that firm's use of e-marketing in textile sector of Pakistan will be high when there is high pressure from the trading partners.

So it implies that the success of the internet initiatives of an organization depends not only on its own effort, but also on the willingness of its trading partners like suppliers, vendors and customers in order to engage in electronic interactions and transactions. However, in Pakistan, particularly in the textile value chain, each firm is connected with another firm, like spinning is a supplier of weaving division and at the same time finishing and dyeing unit is the buyer of weaving fabric for further processing. This indicates that these business units are buyer and seller at the same time and act like a trading partner. But still, even after a large value chain, there is no proper electronic way to communicate with each other or to share the information through websites or electronic manner. All transactions and way of doing business is manual except e-mails (Abrar *et al.*, 2008). However, the findings also concur with the explanation of DOI and RBV theory on the external environment.

5.4.8 Competitive Pressure (CP) and Use of E-Marketing (UEM)

Finally, to achieve the final hypothesis of direct relationship with the use of e-marketing, H16 was articulated to find positive relationship between competitive pressure and the use of e-marketing in textile firms of Pakistan. Though, the empirical findings explained that there is a significant positive relationship between competitive pressure and the use of e-marketing ($\beta = 0.196$, $T = 3.815$, $p\text{-value} < 0.05$). The findings of this study also postulate the findings of previous literature that CP is significantly and positively related to use of e-marketing (Shrivastava, 1995; Kuan and Chau, 2001; Lal, 2002; Gupta, Seetharaman and Raj, 2013; Ahmad, Bakar, *et al.*, 2014; Rahim, Bakar and Ahmed, 2015).

The findings of the study clearly explained that the company feels pressure when it observes that other companies in the industry are adopting the latest technology and therefore feels the need to adopt the new technology to stay more competitive. Moreover, relationships among industrial players within the same sector also influence the overall structure of the industry. Conclusively, to maintain the position of competitiveness, the firm has to adopt the technology to attain maximum market shares both at local & international level, furthermore, such activities increase the confidence level of the customers and help the company to increase their sales to pay back the investment in short span of time.

5.5 Direct relationships between Use of E-Marketing (UEM), Technological Opportunism (TOP) and Firm Performance (FP)

The third objective of this study is to examine the relationship between UEM, TOP and performance of textile sector in Pakistan. To achieve this objective, one direct relationship between the mediator (UEM) and the dependent variable (FP) was tested (H17) and also a direct relationship of moderating variable (TOP) and dependent variable (FP) was examined (H18).

5.5.1 Use of E-Marketing (UEM) and Firm Performance (FP)

In order to achieve the stated object, H17 was formulated which states that there is a positive relationship between UEM and performance of textile sector in Pakistan. Thus, the empirical findings support the hypothesis and found a positive significant relationship with firm performance ($\beta= 0.179$, $T= 3.169$, $p\text{-value} < 0.05$). 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 and Lien, 2013; Eid and El-Gohary, 2013; Rahayu and Day, 2015; Sheikh, Shahzad and Ishak, 2016).

It implies that the researcher has ascertained on the basis of considerable evidence that use of e-marketing can provide a number of strategic benefits to the firms for instance, it helps in the reduction of supply chain cost, develop new markets, increase distribution efficiency and to interact with buyers more closely in developing long term relationship. Therefore researcher conclude that e-marketing innovativeness has a direct impact on the customer relationship performance and growth of the textile firms in Pakistan.

Besides, companies are focusing more on marketing activities in order to enhance their export performance (Sheikh, Shahzad and Ishak, 2016). In perception to increase their export performance, firms are adopting E-Marketing tools and using them to have a competitive advantage, cost reduction of distribution, increase supply chain efficiency, close interaction with buyers and to perform market research for product development to find new customers and also to maintain the existing customers.

5.5.2 Technological Opportunism (TOP) and Firm Performance (FP)

H18 was achieved, which states that there is a positive relationship between technological opportunism (TOP) and performance of textile sector in Pakistan. The findings revealed that there is a significant positive relationship with technological opportunism and firm performance ($\beta = 0.151$, $T = 2.611$, $p\text{-value} < 0.05$). The results are also supported by a few of the previous studies (Voola *et al.*, 2012; Chen and Lien, 2013; Lucia-Palacios *et al.*, 2013). So it implies that technology opportunism capabilities help firms to increase the assimilation of different business processes and create a strong relationship between technology adoption, usage and business performance. The findings conclude that firms that are more technological opportunistic will systematically analyze the market to look for new opportunities and also to respond those opportunities for better performance (Voola *et al.*, 2012).

5.6 Mediating Role of Use of E-Marketing (UEM) on the Relationship between TO, RA, OR, TMS, MO, GS, TP, CP and Performance of Textile Sector in Pakistan

The fourth objective of this study is to find out whether use of E-Marketing mediates the relationship between technological factors (technology orientation, relative advantage), organizational factors (organizational resources, top management support & market orientation), environmental factors (government support, pressure from trading partners & competitive pressure) and firm performance, particularly in the textile sector of Pakistan. Moreover, most importantly, eight mediating hypotheses were proposed and examined by using the bootstrapping method (Preacher & Hayes, 2008). Precisely, hypotheses H19,

H20, H21, H22, H23, H24, H25 and H26 were tested to see the mediating role of the use of e-marketing.

The findings of this research indicate that use of e-marketing has mediated the relationship between technology orientation (TO), relative advantage (RA), top management support (TMS), market orientation (MO), pressure from trading partners (TP), competitive pressure (CP) and performance of textile sector in Pakistan. Unfortunately, this study was unable to find enough evidence to support the claim that use of e-marketing mediates the relationship between OR, GS and performance of textile industry.

To begin with, H19 was tested, since one of the criteria for mediation to hold is the relationship between the independent variable to the mediator and the mediator to dependent variable (Preacher & Hayes, 2008). In order to attain the mediation objective, H19 was tested, which states that use of e-marketing mediates the relationship between TO and performance of textile sector in Pakistan (FP). However, the empirical result of current study revealed that UEM mediates the relationship between TO and FP ($\beta = 0.151$, $T = 2.611$, $p\text{-value} < 0.05$). Consistent with the RBV, this finding suggests that TO as a firm's valuable and complex resource can lead to superior performance, particularly when textile firms starts using the e-marketing in their process. To this end, the finding suggests that the textile industry in Pakistan needs to be technology oriented, which will lead them to better use of e-marketing and superior performance.

Next, the reason behind the relationship between RA and performance can be explained by the use of e-marketing in the textile sector of Pakistan. Hence, H20 states that use of e-marketing mediates the relationship between RA and performance of textile sector. Nevertheless, in this study, RA significantly and directly affected firm performance and use of e-marketing, moreover, the mediation result also shows that RA affects firm performance through the use of e-marketing in the textile firms ($\beta= 0.07$, $T= 3.27$, $p\text{-value}< 0.05$).

In other words, the relationship has good magnitude and is significant due to the mediation role of the use of e-marketing. In summary, based on the present study's results, the influence of RA on the firm performance is better understood with the use of e-marketing because bringing the positive and effective technology in the firms will ultimately change the traditional system of the businesses and firms start adopting the latest technology in their firms as also explained clearly in the diffusion of innovation (DOI) theory, where RA is considered as one of the organizational attribute. Hence, based on the results, H20 is supported.

Next, the mediating effect between OR and FP has been analyzed, therefore, H21 has been stated. However, the empirical findings explain that OR has found no relationship, both directly with firm performance and the use of e-marketing as well as indirectly through the use of e-marketing ($\beta= 0.00$, $T= 0.06$, $p\text{-value}> 0.05$). Therefore the study findings conclude that organizational resources (OR) have no effect in overall framework, in line with the RBV theory, OR has found significant but did not relate to the findings of current

study particularly in the textile sector of Pakistan. One of the main reason is that organizational resources are the assets of the company, which are fixed in nature, where technological change, particularly the e-marketing technology is the part of the process and intangible in nature, therefore, increase or decrease of resources does not impact on the use of e-marketing as this is helpful with other variables of this study. This finding also concurs with the previous findings by (Inmyxai & Takahashi, 2009; Uz Kurt *et al.*, 2013).

Moreover, to achieve the stated objective, H22 has been formulated, which articulates that relationship between TMS and FP is mediated by the use of e-marketing. However, the empirical findings illustrate that TMS and performance of textile sector in Pakistan is mediated by the use of e-marketing ($\beta = 0.11$, $T = 3.37$, $p\text{-value} < 0.05$). 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. Also, the finding of this research concurs with previous studies which clearly highlight that the use of e-marketing as a mediator between aforesaid relationship plays a significant role (Srinivasan, Lilien and Rangaswamy, 1999; Li, 2008; Ahmad, Bakar, *et al.*, 2014; Arifin and Frmanzah, 2015).

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. So in this case, with respect to implementation or usage of any technology in the firm, the owner of the textile firm decide about investing in such technology, however company employees support the decision of the top

management by giving their opinions after doing proper research. However, in the current study, use of e-marketing strongly mediates the relationship of TMS and superior performance of textile firms. Moreover, DOI theory also supports this explanation based on its five adoptions and decision making stages with the help of TOE framework used in the current study. Hence H22 is supported.

The reason behind the relationship between MO and firm performance can be explained by the use of e-marketing. Hence, H23 states that use of e-marketing mediates the relationship between MO and performance of textile sector in Pakistan. However, in this study, MO did not show any direct relationship with firm performance and use of e-marketing and found insignificant, but interestingly, the empirical findings of this hypothesis revealed that MO affects the performance of textile sector by the mediating role of the use of e-marketing ($\beta= 0.04$, $T= 1.83$, $p\text{-value}< 0.05$).

In this case, the result confirmed that textile firms' ability to attract, retain more customers and deal with competition is just because of the use of e-marketing in their process and consequently to achieving higher performance. This seems to indicate that firm performance depends on MO when firms have the technology like e-marketing to reach global markets as well as the local markets. However, e-marketing also helps to maintain the CRM department of the company where, the findings agreed with the past research (Narver, Slater and MacLachlan, 2000; Rapp, Schillewaert and Hao, 2008; Voola *et al.*, 2012). Which shows that MO is related to firm performance through some mediating variables like technology adoption, e-business, e-marketing or innovation. Regarding the

current study, this finding supported by the RBV theory which suggests that firm performance is achieved as a result of matching valuable tangible and intangible resources. 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. Hence, H23 is supported.

In order to achieve the initially defined objective, Hypothesis 24 has been stated, which clearly states that the relationship between GS and FP is mediated by the use of e-marketing. However, the empirical findings showed that in case of government support (GS), the direct relationship with firm performance has found significant, but on the other hand, direct relationship with UEM as well as by including mediating variable, the study has found insignificant relationship ($\beta = 0.02$, $T = 1.22$, $p\text{-value} > 0.05$). These findings are also concurrent with previous studies who showed the insignificant relationship of GS with firm performance through use of mediating variable like use of e-marketing or e-business (Seyal *et al.*, 2004; Thatcher, Foster and Zhu, 2006; Al-Hudhaif and Alkubeyyer, 2011; Ueasangkomsate, 2015).

Moreover, in line with the results, the researcher has found some strong justifications against these results, with regard to direct positive relationship of GS with firm performance, there are number of reasons that have already been discussed, shortly, the reasons are: government support in terms of rebates, tax free zone, imports and exports, tax reduction, cut cost for agriculture based sector, cotton farming programs in the country as Pakistan is agro-based country and textile is the major agro based industry of Pakistan

which heavily contributes in the economy of Pakistan. Therefore, if GS increases ultimately it will affect the performance. On the other hand, the government is not interested in the internal affairs of the company like how to reach in the global market, how to access the customers, how to increase the sales of the company, what our neighboring countries are doing, how e-business, e-marketing is spreading globally, how e-marketing can help the buyers and sellers to cut their costs in their marketing activities as well as in their overall business process. Therefore, the current study has found no significant relationship directly with e-marketing and indirectly by the use of e-marketing in the relationship between GS and FP. Thus, H24 has found no support in the current study.

Next, check the mediating role of use of e-marketing between pressure from trading partners (TP) and firm performance (FP), H25 has been stated. However, the empirical findings explain that TP has a direct relationship with both FP and UEM, now in the case of mediation, TP has also found positively significant with FP with the mediating role of the use of e-marketing ($\beta = 0.07$, $T = 2.82$, $p\text{-value} < 0.05$). The findings are also similar to the previous studies (Chwelos, Benbasat and Dexter, 2001; Ahmad, Bakar, *et al.*, 2014; Porterfield, 2008; Rahayu & Day, 2015).

It implies that the external pressures were significant determinants for instance, trading partners play an essential role in generating the pressure to adopt latest technology in the business transactions, interaction between the customers and to maintain the close relationship, so while building a good communication channel with the trading partners, companies survive for the longest period of time and can compete with other competitors

as well. While, in the presence of trading partners, the business performance enhances due to several reasons for instance cost reduction in communication, improvement in lead time or delivery, proper complaint handling and quick response are a few of the reasons which ultimately leads to better performance. Hence, H25 has been supported.

Finally, to achieve the final hypotheses of the fourth objective, H26 has been stated, which illustrates that the use of e-marketing mediates the relationship between competitive pressure and firm performance. Although, CP has a direct relationship with firm performance and the use of e-marketing, the mediation has performed empirically well in the current study. The findings revealed that use of e-marketing has positively mediated the relationship between CP and performance of textile sector ($\beta = 0.07$, $T = 3.74$, $p\text{-value} < 0.05$). These results are also similar to the previous studies (Grover, 1993; Premkumar and Rainamurthy, 1995; Premkumar, 2003; Varukolu, 2007). Which implies that changes in environment might stimulus the businesses to pursue for new technologies.

In the textile industry where the competition is very high, there is a need for firms to get progress in technology and to use the technology like e-marketing to attain and sustain competitive advantage. While, competition is the environment variable which influence the business strategy, however, it has found to be a most significant persuasive that governs the level of technology adoption and usage in an organization. Lastly, this use of advance technologies (e-marketing) helps the firms to produce better customized products at a competitive price to gain maximum shares in the market. However, the findings also correlated with the explanation of RBV and DOI theory.

5.7 Moderating Effect of Technological Opportunism (TOP) with the Relationship between Use of E-Marketing (UEM) and Firm Performance (FP)

The 5th and the last objective of this study is to examine the moderating role of technological opportunism on the relationship between the use of e-marketing and performance of textile sector in Pakistan. To achieve this objective, only one hypothesis are required and formulated which is H27.

Although many studies confirmed that technology opportunism capabilities help firms to increase the assimilation of different business processes and create a strong relationship between technology adoption and business performance. Several studies have also examined this construct as an antecedent of business-to-business market firms (Klinger, 2004; Mishra and Agarwal, 2010). However, Lopperi (2006) focus on wireless e-business, besides, firms that are more versus less technologically opportunistic are more likely to adopt a greater range of ITs and use them more intensively in all their business processes. All of the previous research reaches the same conclusion: the degree of technological opportunism is associated with adopting and implementing new technologies.

Remarkably, the current study empirically found that technology opportunism plays a significant role as a moderator in the relationship between the use of e-marketing and performance of textile sector in Pakistan ($\beta = 0.149$, $T = 3.36$, $p\text{-value} < 0.05$). The study results are also concurrent with the previous literature (R Srinivasan, Lilien and Rangaswamy, 2002; Raji Srinivasan, Lilien and Rangaswamy, 2002; Voola *et al.*, 2012;

Chen and Lien, 2013; Lucia-Palacios *et al.*, 2013). 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.

In line with the previous discussion, technology opportunism capability enhances IT diffusion strategy, which, in turn, influences firm performance and also technology opportunism directly affect the firm performance. Here, in the current study scenario, technology opportunism is motivating the firms to bring new innovation like e-marketing from the environment and diffuse it into each and every process of the firm, so the departments could work and use e-marketing at maximum level, therefore company with such use of technology will perform better in the market as they will utilize their capabilities to achieve main objectives of the firm. Hence, H27 is supported.

5.8 Implications of the Study

Governments, practitioners and academic researchers in the area of marketing management, strategic management and entrepreneurship have given much attention to the performance of textile industry and other variables, influencing their performance. Based on the findings of this research work, the study has more than a few important implications, specifically in terms of performance of textile sector in Pakistan. The results of this study provide practical, theoretical and methodological implications. These implications are

generalizable to other industrial sectors as well, however, the implications are discussed in the following sub-sections.

5.8.1 Theoretical Implications

In terms of academic implications, the research can be considered unique in the field of e-marketing in general and e-marketing in textile sector of Pakistan in particular. This study provides empirical evidence for the theoretical relationships hypothesized in the research framework. Specifically, it highlights the mediating role of the use of e-marketing and the moderating role of the technological opportunism on the relationship between technological factors which are TO and RA, organizational factors which are OR, TMS and MO, environmental factors which are GS, TP, CP and their effect on performance of textile sector in Pakistan.

The first significant implication of this research in the e-marketing field is not only based on validating TOE model and DOI theory in the context of e-marketing adoption, but also the extension of these two to increase their ability to illustrate this adoption. This study proposed and examined the factors that affect the use of e-marketing by extending TOE and DOI to include factors that are more related to the performance of textile business in Pakistan. However RBV is discussing about the tangible and intangible factors which are helping the firm to achieve better performance. Thus, the study helps researchers to have a deep understanding about the different relationships among TO, RA, OR, TMS, MO, GS, TP, CP with use of e-marketing as well as their relationship with textile sector performance directly and indirectly by use of e-marketing as a mediating variable and technology

opportunism as a moderating variable between UEM and FP. Consequently, it confirms that the use of e-marketing depends on the perceptions of textile businesses owners and marketing managers about its effectiveness based on all these current study variables.

Moreover, this study is the first to validate empirically the relationship between the use of e-marketing and performance of textile sector in Pakistan. The study has developed, tested and validated the model empirically and this again provides other researchers with a valid model to be used in order to investigate the impact of e-marketing uses of firm performance in other types of enterprises, industries or in other countries.

Previous studies have revealed that TOE factors influence the technology adoption. However, based on the literature, the current model has been extended to firm performance indirectly through a mediating variable based on the DOI and RBV theory (Wernerfelt, 1984; Tornatzky and Fleischer, 1990; Rogers, 1995; Wang, Wang and Yang, 2010; Baker, 2011; Oliveira and Martins, 2011). On this account, little or no attention has been given to the mediation role of the use of E-Marketing in explaining how and why TOE factors and firm performance relationship exists. Moreover, previous studies fail to explore its mediation role with business performance. In view of that past studies recommend that the mediating role of other variables, such as use of e-marketing need to be explored more (El Gohary, 2012; Eid and El-Gohary, 2013; Kanchanataneet al., 2014; Sheikh, Shahzad and Ishak, 2016).

This study is possibly one of the few studies to suggest and validate empirically those factors that affect the use of E-Marketing by textile sector. Moreover, the study provided the first attempt to empirically explore E-Marketing practices of Pakistan textile industry. Although the findings showed that textile firms' owners, marketing managers and sales managers have a very early stage of knowledge about E-Marketing, these findings add to the current knowledge in the field and encourage other researchers to conduct more research to investigate the practices of E-Marketing in Pakistan in different contexts.

In addition, a review of past literature on technology usage and firm performance suggests that most of the studies have been conducted in developed nations for instance, USA, Europe and Latin America, African countries by ignoring Asia Pacific countries like Pakistan. Similarly, even in the aforementioned countries, many studies have concentrated on SMEs (Alzougool and Kurnia, 2008; Ahmad, Abu Bakar, *et al.*, 2014; Shehu and Mahmood, 2014; Iddris and Ibrahim, 2015; Mzee, Ogweno and Irene, 2015). Therefore, by conducting this study in Pakistan, it is expected that it will improve the understanding of firm performance, particularly of textile sector in Pakistan and other developing countries overall industry performance.

5.8.2 Managerial Implications

Firstly, textile sector of Pakistan has been recognized as one of the major contributors to employment, economic growth and poverty alleviation. Government and policymakers 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).

However, the government has numerous funding programs and support agencies to assist the textile sector (SMEDA, 2016; Survey, 2015). Lack of awareness of such government support may be the reason most of the textile owners are not benefiting from these organizations. This indicates the need for the government to improve coordination among these institutions and make them well-known to textile owners through advertisements, workshops and other awareness programs.

Moreover, the study findings confirm that IT theories (namely TOE framework and DOI theory) are valid in illustrating the adoption of E-Marketing by firms, but in current study the model has been extended to performance of the firms which is mainly supported by the RBV theory, additionally the RBV is explaining the relationship between all tangible and intangible factors such as TOE factors including intangibles are TO, RA, TMS, MO, TP, CP, GS with performance of textile industry (FP). The findings suggest that TOE factors of the current study are among the main factors affecting the adoption of E-Marketing by textile firms. Since TO, RA, OR, TMS, MO, TP, CP and GS are important determinants of use of E-Marketing also explained by DOI theory, moreover, governmental agencies, non-governmental organizations and other institutions (e.g. Universities, colleges and other educational institutions) linked with textile sector should aim at increasing textile business

owners and/or marketing managers' awareness of these issues and how tasks can be supported by e-marketing. Moreover, such organizations should aim at reducing apprehensions about the complexity of e-marketing usage.

Based on this study's findings and several past studies, it is empirically established that TOE factors (TO, RA, OR, TMS, MO, TP, CP and GS) generally contributes 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 when the firm will be more technology oriented (TO) the use of e-marketing will increase and ultimately enhances the firm performance or competitive edge.

Whereas, relative advantage is the major contributor of DOI theory and organization as well, 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. Although TMS is also one of the big factor, especially in the textile sector of Pakistan as this industry is under the control of families or group of families, therefore TMS is essential in bringing the e-marketing in their firms for better quality. In addition to this, competitive pressure is another important determinant of bringing technology in the firms for better performance as well as pressure from trading partners who continuously

work like a partner in the company and firm, consider them as their partners not as vendors, in this case pressure from TP have motivated the firms in the current study to use e-marketing for enriched performance.

Besides, the current study has not supported OR and GS in this scenario as several reasons has explained earlier. If we have a recapitulation of discussion, organization resources are not required to bring less expensive technology like e-marketing in their firms whereas government is also not supporting to bring e-marketing in textile sector of the firms.

Moreover, based on the same findings textile business owners and/or marketing managers should aim at “increasing the awareness of their employees about these issues and how tasks can be supported by e-marketing, how the use of e-marketing can create relative advantages for the enterprise” and finally how e-marketing practices can be easy to use and implement. This has explained more clearly by moderating role of technological opportunism which has contributed in this study positively, which also explains that technology opportunism capabilities help firms to increase the assimilation of different business processes and create a strong relationship between technology adoption and usage and business performance that increasing employees’ awareness about these issues will provide a very good supportive organizational culture towards e-marketing which in turn will lead to a good impact on performance of textile business.

Finally, employing the same logic and based on the same findings, as well as findings related to the current practices of e-marketing by Pakistan Textile business, the Pakistan

government through its ministries, agencies (Ministry of Textile, Pakistan, Small and medium enterprise development authority-SMEDA) can use the e-marketing adoption model developed within this study as well as its findings to increase the levels of e-marketing adoption, diffusion and practices by textile businesses and other businesses in general which will lead to a positive impact on Pakistan economy performance.

5.9 Limitation and Suggestions for Future Research

Despite several significant contributions highlighted in this study regarding performance of textile sector in Pakistan, it has several limitations that need to be identified. The main limitation and future direction of this study addressed through three categorization named as causality, generalizability and methodology;

The potential limitation of this study relates to the measures of the constructs used in this research work. The variables in this study were measured as a one-dimensional variable. However, variables of the current study can give more information if considered as multi-dimensional. Therefore, further investigation on the relationship between these variables and firm performance using multi-dimensional scale is a fertile area of research.

Firstly, whilst this research targeted only the performance of textile firms in Pakistan, but there is a need to examine the performance of different types of SMEs (service and manufacturing), such as agriculture, mining, fishing, building, and construction, wholesale and retail, hotel and restaurants, transportation, real estate, education, and so on. Hence, the study is limited by neglecting the fact that enterprise characteristics can be different

according to business type or sector. Future studies should consider investigating firm performance and E-Marketing technology in other parts of the country and sub-sector activities, which may provide more in-depth results.

Secondly, the study adopted cross-sectional design for the survey in which the opinions of respondents was captured at one specific point in time. Thus, due to the cross-sectional nature of this study, it is restricted in proving causal relationships between the variables (Sekaran & Bougie, 2010). As the data was collected at one time, this might not permit the data to represent long-term behaviors of the firms. In view of these restrictions, a longitudinal study is suggested for future research. This may help researchers get more understanding on the subjected matter and validate the findings from cross-sectional studies.

Thirdly, this study examined the mediating role of the use of e-marketing and the moderating role of the technological opportunism on the relationship between TOE factors and performance of textile sector in Pakistan. The independent variables tested in the study were confined to performance. Other factors that belong to TOE factors can be used to extend the framework proposed in the study. Moreover, other moderating variables can be used to see the effect between the use of e-marketing and firm performance, or the innovative mediation can be taken to see the effect between the variables.

Besides, the current study adopted quantitative method and rely on a single method of data collection. In other words, the questionnaire was the only instrument used in gathering the

data in this study. Thus, the responses may not consistently and accurately measure the study variables. It will be of interest if future studies combine both quantitative and qualitative methods to carry out an in-depth investigation on the performance and use of e-marketing in the industry of Pakistan.

Secondly, this study is based on the data on self-reported questionnaire; hence, the probability of a common method variance might exist because all of the variables have been measured, by using a 'single survey instrument'. In accordance to Avolio *et al.* (1991) the common method variance is more inconvenient in analyzing the relationships between the attitudinal or psychological data obtained from the single respondent at a particular or one point of time. In this study, the data of both independent and dependent variables are perceptions based. Therefore, the future research would include a method, which can decrease the common method variance for example, instead of using a perceptions based data, and the objective measures should be used.

5.10 Conclusion

This study has contributed empirically to a number of recognized relationships between the variables, which has been tested both directly and indirectly in order to provide answers to the research questions and to accomplish the related research objectives given in the introduction chapter of current study.

After questionnaire screening and coding of variables, current study collected the data from the general manager marketing working in textile firms in Sindh and Punjab province of

Pakistan. After data collection, necessary multiple procedures of analyses was taken to analyze the data by using SmartPLS 3.0, whereas both the measurements and structural models were examined and tested. Moreover, according to the previous studies, the statistical results of the current study are justifiable.

The main purpose of this research work is to examine the mediating role of use of e-marketing and moderating role of technological opportunism as well as direct relationship of independent and dependent variable. However, the study has achieved all the five objectives as discussed in chapter 1.

The results of this current study have revealed that six (6) out of the eight (8) hypothesis of first objective were achieved by testing eight direct relationships with firm performance (DV). The study provides empirical evidence of the significant relationship between TO, RA, TMS, GS, TP, CP and firm performance (FP).

Based on second main objective of the study. The empirical findings revealed that five (5) out of eight (8) hypothesis has found significant by testing eight direct relationships with the use of e-marketing (Mediating Variable). The study provides empirical evidence of the significant relationship between TO, RA, TMS, TP, CP and Use of E-Marketing (UEM).

However, according to the findings of third objective. The empirical findings revealed that two (2) out of two (2) hypothesis has found significant. The relationship was to check the validity and strength of mediating and moderating variable as a predictor for firm

performance. The study provides empirical evidence of the significant relationship between UEM, TOP and firm performance (FP).

Based on the findings of the fourth objective. Likewise, this objective was achieved by testing the mediation hypotheses. The findings show that use of e-marketing played a mediation role between TO, RA, TMS, MO, TP, CP and firm performance (FP).

The fifth, as well as the last objective which has been accomplished in this current research revealed a significant moderating effect in the relationship between the use of e-marketing and firm performance. This implies that the positive association between the use of e-marketing (UEM) and firm performance (FP) is moderated by Technological Opportunism (TOP).

Moreover, the study provides practical, theoretical and methodological contributions in terms of the influence of these TOE factors on performance of textile sector in Pakistan. Based on the limitations of the study, several directions for future research are outlined. Conclusively, this research work has added valuable implications, both practically, theoretically and methodologically in the performance of textile firms and electronic marketing literature.

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APPENDICES

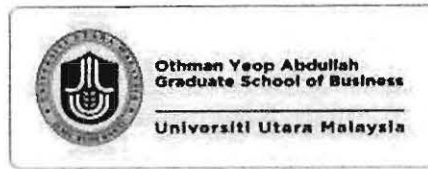


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APPENDIX A
QUESTIONNAIRE

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Research Questionnaire

The Impact of TOE factors on the Performance of Textile Sector in Pakistan: The Mediating Role of E-Marketing Uses

Dear Sir/Madam,

This questionnaire is designed to study the impact of E-Marketing Uses (Achieving marketing objectives and functions through the use of electronic communication technology – e.g. Internet, E-mail, Extranet, Mobile, and Intranet) on Performance of Textile Sector in Pakistan. For this purpose, your Enterprise has been selected for this study based on a Cluster random sample. The study is purely academic and the data you provide will be used only for quantitative research and will help in gaining a better understanding of the effects of using E-Marketing and its impact on Performance of Textile Sector in Pakistan. The questionnaire should be filled in by the: entrepreneur, general marketing/sales manager or by the person(s) who is in charge of the E-Marketing activities within your enterprise.

Of course you are not required to identify yourself or your company and your response will be kept strictly confidential. Only members of the research team will have access to the data you give and the completed questionnaire will not be made available to anyone other than the research team. An executive summary of the research major findings can be sent to the participating enterprises. If you would like to receive a copy of the study summary report, please include the relevant forwarding address at the end of the questionnaire.

Your kind cooperation in this research is very much appreciated and the research team sincerely hopes that you will find the study of interest to you and hopefully to your Enterprise.

Thank you very much for your time and cooperation.

Yours sincerely,

Adnan Ahmed Sheikh

Ph.D Scholar

University Utara Malaysia,

Kedah, Sintok. (06010)

OYA- Graduate School of Business

E-mail: Adnanucp@gmail.com

The questionnaire should be filled in by the:

- Marketing/ GM'S / Managers/ Sales officer or – by ☒

- The person who is in charge of Electronic Marketing (E-Marketing) activities in the enterprise.

Please tick in the appropriate option

1. Where is your enterprise based?

- Multan
- Lahore
- Faisalabad
- Karachi
- Other Please Specify _____

2. My enterprise is:

- Industrial/ Manufacturing
- Traders
- Brokerage House
- Traders + Brokerage house
- Other Please Specify _____

3. In which sector does your enterprise operate in?

- Textile Industry
- Pesticide
- Pharmaceuticals
- Electronics
- Petroleum
- Beverages
- Other Please specify _____

4. ☒ Our enterprise is selling:

- Nationally
- internationally
- Both

Questions in this part concern your ability, reactions and willingness to use E-Marketing to conduct the marketing activities of your enterprise. By E-Marketing we mean: conducting marketing activities depending on electronic marketing tools and means such as: Internet, Intranet, E-mail, Extranet and Mobile marketing. The questions are designed to measure the factors that affecting your Firm Performance due to lack of E-Marketing technique. Please circle the number that reflects to what extent the following motivates you to adopt E-Marketing for marketing purposes where:-

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat disagree	Neutral	Somewhat Agree	Agree	Strongly agree

Technology Orientation

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our company has a large, strong network of technology providers							
2	Our company has a better technological knowledge than our suppliers							
3	Our new product is always state of the art technology based.							
4	Our company is proactive in the development of new and technologies and customer applications							

Relative Advantage

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	The technology will allow our company to better communicate with our business partners							
2	The technology will allow our company to cut costs in the business							
3	Implementing the technology will increase the profitability of our company							
4	Adoption of the technology will provide timely information for decision making							

Market Orientation

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
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

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	The owner of our company enthusiastically supports the adoption of new technologies							
2	The owner or manager has allocated adequate resources to adoption of these new technologies							
3	Top management is aware of the benefits of these new technologies							
4	Top management actively encourages employees to use the new technologies in their daily tasks							

Organizational Resources

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Most of our organization employees are computer literate							
2	Most of our organization employees have unrestricted access to computers							
3	Our company people are open and trusting with one another							
4	Communication is very open in our organization							
5	Our organization exhibits a culture of enterprise wide information sharing							
6	Our organization have a policy that encourages grass roots e-marketing initiatives							
7	Failure can be tolerated in our organization							
8	Our organization is capable of dealing with rapid changes							

Government support

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our organization believe that there are effective laws to protect consumer privacy							
2	Our organization believe that there are effective laws to combat cyber crime							
3	Our organization believe that the legal environment is conducive to conduct business on the Internet							
4	The government demonstrates strong commitment to promote e-marketing							

Trading Partners

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our organization suppliers strongly urge us to adopt e-marketing							
2	Our organization customers strongly insists that we implement e-marketing							
3	Our organization believe that our customers are ready to do business on the Internet							
4	Our organization believe that our business partners are ready to conduct business on the Internet							

Competitive Pressure

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Competition in our industry is cutthroat							
2	There are many "promotion wars" in our industry							
3	Anything that one competitor can offer, others can match readily							
4	Price competition is a hallmark of our industry							
5	One hears of a new competitive move almost every day.							
6	Our company competitors are relatively weak.							
7	Our organization believe that we will lose our customers to our competitors if we do not adopt these new technologies							
8	Our organization feel that it is a strategic necessity to use these technologies to compete in the marketplace.							

Uses of E-Marketing

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our organization use e-marketing resources (such as web site and e-mail) to communicate with customers							
2	Our organization use e-marketing resources to support firm's traditional commercial activities (e.g. pricing information, customer service).							
3	Our organization use e-marketing resources to conduct commercial transactions (e.g. selling products and accepting payment via web site).							
4	Our organization have a computerized customer database that use to perform marketing activities (e.g. inform customers about new products).							
5	Our organization have implemented e-marketing in all business processes							
6	Our organization e-business plans are integrated into overall business plan							
7	Our organization has freed up the necessary funds for our e-business initiatives							
8	Our organization possess the adequate technological infrastructure and competencies to implement e-business as well							

Technology opportunism

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our organization is often one of the first in our industry to detect technological developments that may potentially affect our business.							
2	Our organization actively seek intelligence on technological changes in the environment that are likely to affect business.							
3	Our organization is often slow to detect changes in technologies that might affect our business.							
4	Our organization periodically review the likely effect of changes in technology on our business.							
5	Our organization generally respond very quickly to technological changes in the environment.							
6	This business lags behind the industry in responding to new technologies.							
7	For one reason or another, our organization is slow to respond to new technologies.							

10	Our organization tend to resist new technologies that cause current investments to lose value.							
----	--	--	--	--	--	--	--	--

Firm Performance

		Str. Disagree	disagree	Some what Dis-agree	Neutral	Some what Agree	Agree	Str. agree
1	Our organization Sales volume achieved as compared to competitors.							
2	Our organization market share achieved as compared to competitors.							
3	Our organization overall profit levels achieved as compared to competitors.							
4	Our organization profit margins achieved as compared to competitors							
5	Our organization return on investment achieved as compared to competitors.							
6	Our organization levels of customer loyalty achieved as compared to competitors.							
7	Our organization levels of customer satisfaction achieved as compared to last year.							

About you: (Demographics)

1. Gender

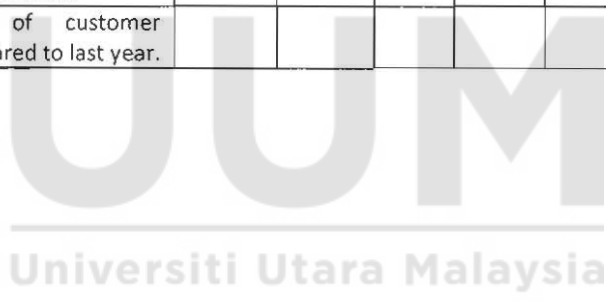
- Male
- Female

2. Age Category

- Under 30 yrs
- 30-40 yrs
- 41-50 yrs
- 51-60 yrs
- More than 60 yrs

3. Level of Education

- College certificate
- University graduate
- Postgraduate studies



Please review the statements below and indicate the level to which you agree or disagree with each statement

	In our enterprise we depend on	To conduct up to --- % of our Marketing Activities				
		0%	25%	50%	75%	100%
1	Internet Marketing	1	2	3	4	5
2	E-Mail Marketing	1	2	3	4	5
3	Mobile Marketing	1	2	3	4	5
4	Intranet Marketing	1	2	3	4	5
5	Extranet Marketing Business to Business (B2B)	1	2	3	4	5
6	Business to Government (B2G)	1	2	3	4	5
7	Other tools or forms of E-Marketing	1	2	3	4	5

Thank you very much for your time and effort, your kind cooperation is very much appreciated by the research team. Please complete the following part of the questionnaire;

Contact Name: Job Title:
 Company contact details

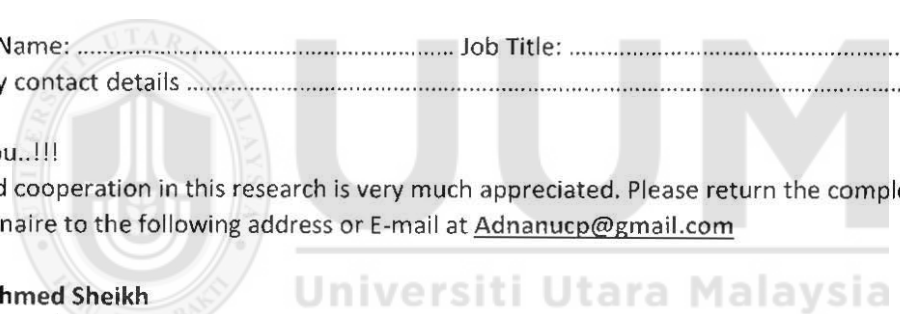
Thank you...!!!

Your kind cooperation in this research is very much appreciated. Please return the completed questionnaire to the following address or E-mail at Adnanucp@gmail.com

Adnan Ahmed Sheikh

Address: 129/1, Old Bahawalpur Road, Multan.

Contact: 0092-3472729917





APPENDIX B
PLS OUT PUT

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Heterotrait-Monotrait Ratio (HTMT) -Inference

	Original Sample (O)	Sample Mean (M)	2.50%	97.50%
FP -> CP	0.102	0.1503	0.0931	0.2227
GS -> CP	0.1041	0.1387	0.0669	0.249
GS -> FP	0.2584	0.2685	0.1509	0.4048
MO -> CP	0.2087	0.2328	0.1366	0.3435
MO -> FP	0.1698	0.1955	0.1195	0.2849
MO -> GS	0.0479	0.1065	0.0525	0.1855
OR -> CP	0.6083	0.607	0.5017	0.7028
OR -> FP	0.1302	0.1624	0.1009	0.2436
OR -> GS	0.0553	0.1051	0.0547	0.1903
OR -> MO	0.2408	0.2501	0.1289	0.3903
RA -> CP	0.2155	0.2337	0.1345	0.3541
RA -> FP	0.1445	0.1785	0.0971	0.2899
RA -> GS	0.1084	0.1385	0.0724	0.2183
RA -> MO	0.1317	0.1607	0.0931	0.2454
RA -> OR	0.0859	0.1323	0.0795	0.22
TMS -> CP	0.238	0.2633	0.1672	0.3741
TMS -> FP	0.532	0.5333	0.4012	0.6585
TMS -> GS	0.1356	0.1665	0.0867	0.2797
TMS -> MO	0.0847	0.1338	0.0722	0.2256
TMS -> OR	0.0923	0.1409	0.086	0.2179
TMS -> RA	0.1975	0.222	0.1327	0.3357
TO -> CP	0.1448	0.186	0.1085	0.2904
TO -> FP	0.4791	0.4796	0.3243	0.6227
TO -> GS	0.222	0.2457	0.1376	0.3734
TO -> MO	0.2264	0.2606	0.169	0.3719
TO -> OR	0.1318	0.1718	0.1017	0.2597
TO -> RA	0.3546	0.3607	0.2363	0.4893
TO -> TMS	0.3039	0.3274	0.2167	0.4675
TOP -> CP	0.1638	0.1961	0.1387	0.2731
TOP -> FP	0.3279	0.3462	0.2301	0.4735
TOP -> GS	0.1083	0.1501	0.0823	0.2501
TOP -> MO	0.1099	0.1507	0.1003	0.214
TOP -> OR	0.1034	0.1506	0.1033	0.2109
TOP -> RA	0.2131	0.2392	0.1737	0.3147
TOP -> TMS	0.5577	0.5669	0.4482	0.6859
TOP -> TO	0.1632	0.2042	0.1338	0.2952
TP -> CP	0.1514	0.1818	0.085	0.314
TP -> FP	0.3426	0.3437	0.196	0.4899
TP -> GS	0.0618	0.1049	0.0398	0.1999
TP -> MO	0.064	0.1194	0.0607	0.2012
TP -> OR	0.1093	0.1424	0.081	0.222
TP -> RA	0.0888	0.1351	0.0642	0.2485
TP -> TMS	0.2415	0.2495	0.1092	0.4064
TP -> TO	0.1191	0.167	0.0843	0.2803
TP -> TOP	0.1395	0.1782	0.0991	0.2811
UEM -> CP	0.3383	0.3424	0.2458	0.441

UEM -> FP	0.401	0.4017	0.2555	0.5357
UEM -> GS	0.1445	0.1592	0.0645	0.2808
UEM -> MO	0.113	0.1484	0.0951	0.2198
UEM -> OR	0.1175	0.1493	0.0955	0.2308
UEM -> RA	0.2115	0.2235	0.1285	0.3496
UEM -> TMS	0.3971	0.4	0.2681	0.5375
UEM -> TO	0.3425	0.3445	0.2048	0.488
UEM -> TOP	0.1524	0.1799	0.1202	0.2543
UEM -> TP	0.3418	0.344	0.19	0.4944

Heterotrait-Monotrait Ratio (HTMT) - Criterion

	CP	FP	GS	MO	OR	RA	TMS	TO	TOP	TP	UEM
CP											
FP	0.102										
GS	0.104	0.258									
MO	0.209	0.170	0.048								
OR	0.608	0.130	0.055	0.241							
RA	0.216	0.145	0.108	0.132	0.086						
TMS	0.238	0.532	0.136	0.085	0.092	0.198					
TO	0.145	0.479	0.222	0.226	0.132	0.355	0.304				
TOP	0.164	0.328	0.108	0.110	0.103	0.213	0.558	0.163			
TP	0.151	0.343	0.062	0.064	0.109	0.089	0.242	0.119	0.140		
UEM	0.338	0.401	0.145	0.113	0.118	0.212	0.397	0.343	0.152	0.342	