

# A Resource-Based Technological View in the Adoption of an E-Procurement System: Evidence From Textile Sector SMEs

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## ABSTRACT

The large organizations are more interested in adopting new technology because these organizations have more financial resources, human capital, technological competencies, employees, and organizational support. On the other hand, small- and medium-sized enterprises (SMEs) have more challenges with respect to suppliers, organizational contextual factors, technological competencies, and financial resources which negatively influence the adoption rate of e-procurement system. The present study aims to identify these challenges with the purpose to understand the adoption capabilities that can help SMEs to adopt e-procurement systems in the perspective of a developing country. To achieve this aim, the researcher data had gathered from the internal and external stakeholders of five SMEs of textile sector. Findings highlighted that SMEs are facing many challenges such as complexity and formalization, formal and informal linking structures, financial and strategic integration, industry characteristics, and technology infrastructure. The adoption of e-procurement systems can improve the employee abilities, motivation, opportunities, interconnectedness and system openness, inventory system, purchasing process, and organizational capabilities.

## KEYWORDS

E-Procurement, Facilitators and Enablers, Organizational Capabilities, Organizational Feasibility, SMEs, Traditional Procurement Issues

## INTRODUCTION

At present, top management, researchers, and business leaders are more interested to bring business technologies that can reduce the overall costs and employee efforts (Alrousan, et al., 2020; Benabdelhafid & Boufaida, 2015). The adoption and implementation of e-commerce technologies have improved the strategic confidence, organizational capabilities, communication, and decision making (Benabdelhafid and Boufaida, 2015; Ramcharran, 2013). For example, the adoption of e-procurement can improve supply chain management, strategic confidence, SMEs capabilities, purchasing and ordering process, transparency, accountability, and relationship with suppliers (Gunasekaran, et

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a al. 2009; Hassan, et al., 2014; Eei, et al., 2012). Compared to large organizations and SMEs of developed nations, it is found that the SMEs of developing countries have more challenges such as lack of employee skills, high resistance, limited financial resources, and lack of employee and organizational support (Altayyar et al., 2016; Rahayu, & Day, 2015; Elsmami, et al., 2017). Therefore, the adoption rate of e-procurement system is slow in developing countries (Rahayu, & Day, 2015; Elsmami, et al., 2017).

Aslam et al. (2018) have stated that employee motivation, skills, and intention to get new opportunities may vary between developed to developing countries that can influence the technology adoption rate. Many SMEs are still following the traditional procurement system which can reduce the employee learning opportunities and skills, knowledge sharing, effective utilization of resources, competitive advantages, and profitability rate (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017). Researchers have highlighted that traditional procurement system have many challenges such as unimportant paperwork, time consuming, more repetition of tasks, low transparency and accountability, more administration costs and employee efforts (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017). Therefore, those SMEs which are following traditional procurement unable to create competitive advantage, human and intellectual capital, technological competency, profitability and growth (Altayyar et al., 2016; Rahayu, & Day, 2015; Elsmami, et al., 2017). Conversely, it has found that e-procurement system can improve the ordering process, employee learning and motivation, inventory system, and relationship management with stakeholders (Alrousan, et al., 2020; Rahayu, & Day, 2015).

The existing literature has highlighted that level of e-procurement adoption and employees support vary between private to public organization, developed to developing countries, and large organizations to SMEs (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017). Some studies have highlighted that SMEs of Asian countries have more challenges to adopt e-procurement due to low level of human capital, financial resources, and technological competencies (Rahayu, & Day, 2015; Faisal & Talib, 2017). There are many institutional, government, organizational, individual, and financial factors which may negatively influence the adoption of e-commerce technologies in Pakistan (Aslam et al., 2018; Muqadas et al., 2017). It is found that low level of knowledge sharing, lack of reward, limited investment in training and development, high level of organizational politics, workplace injustice, collectivism and resistance to change are some of factors which decreased the technology adoption rate in Pakistan (Aslam et al., 2018; Aslam et al., 2016). According to Aslam et al. (2018), local context, level of employee education, level of employee motivation, training and reward are the main factors which can technology adoption rate in Pakistan.

Textile sector is recognized as largest manufacturing industry in Pakistan (Textile Industry of Pakistan, 2018). The contribution of textile sector is approximately 8.5-percent in the GDP of Pakistan economy and this industry is also known as 8<sup>th</sup> largest exporter in Asia (Textile Industry of Pakistan, 2018). However, it is found that the production and efficiency of textile industry decreased because of load shedding, obsolete technology, lack of cost control, brain drain, lack of human capital, lack of government support, inflation, corruption, and devaluation of currency (Kanat, et al., 2018; Khan and Khan, 2010). This study is selected textile sector SMEs because they are still using traditional procurement system therefore the level of efficiency and effectiveness is decreased. There is limited literature available regarding why SMEs are still using traditional procurement system. It is important to understand which are the barriers that negatively influence the transformation of traditional procurement to e-procurement system for SMEs in Pakistan. Present study aims to highlight these challenges with the purpose to suggest how the top management of SMEs can bring the e-procurement. The findings of this study may fruitful for SMEs to increase organizational capabilities and technological based competencies in the context of a developing country.

## LITERATURE REVIEW

According to Davila et al. (2003), e-procurement has become the important factor of operational excellence specifically for big organizations. Researchers have described e-procurement system includes “*procurement software, B2B (business-to-business) auctions, B2B market exchanges, and purchasing consortia—are focused on automating workflows, consolidating and leveraging organizational spending power, and identifying new sourcing opportunities through the Internet*” (Davila et al., 2003, p.2). It is found that e-procurement can enhance the coordination, collaboration, effective utilization of resources, and speed of work which ultimately improves the both operational and organizational performance (Vaidyanathan, & Devaraj, 2008; Ramayah, et al., 2007). Other studies have described the e-procurement as information technology that is designed with the purpose to manage inventory, decision making, transparency, and relationship with stakeholders (Hsin-Chang et al., 2013; Tai, et al., 2010). Both small and large organizations are adopted e-procurement with the purpose to reduce over-head cost, transaction time, inventory management cost, and purchasing cycle (Hsin-Chang et al., 2013; Vaidyanathan, & Devaraj, 2008). However, there are huge number of SMEs specially in developing countries which are still using traditional procurement system and unable to manage the over-head cost, transaction time, inventory management cost, and purchasing cycle (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017).

SMEs are playing important role in the development and growth of countries (Beck, et al., 2005; Taiwo et al., 2012). SMEs are creating more employment opportunities in developing countries therefore level of spending increased while the level of unemployment and inflation rate is decreased (Abor & Quartey, 2010; Faisal & Talib, 2017; Pandya, 2012). Many studies have highlighted the advantages of SMEs such as they are more engaged with their customers; SMEs are highly flexible; SMEs have low management hierarchy therefore they can take quick decisions; they have better marketing strategies to cover the small market niches; and the management of SMEs have better communication and interaction with staff and customers (Abor & Quartey, 2010; Pandya, 2012; Taiwo, et al., 2012). Faisal and Talib (2017) have argued that effectiveness of e-procurement can foster effective supply chain as well as profitability rate. Bidgoli (2010) highlighted that effectiveness of e-procurement can enhance overall profitability rate (i.e. 6-percent to ten percent). Other benefits of e-procurement are decrease in administration and operational costs, better handling to the demand of customers, decrease supplies cost (i.e. 3-percent to 7percent), foster the effective inventory system and quality of products, and build the focus on main organizational competencies and capabilities (Mohd, et al., 2016; Kurnia, et al., 2015). The study aims to determine the capacity of an approach that guides to use the available stock of resources to expedite efficiency and maintain effectiveness in the domain of procurement and therefore helps to take over a competitive advantage reflected by better lead times, adopting cost effectiveness and customer satisfaction for SMEs of a developing country.

The existing literature has highlighted many obstacles that can enhance the hurdles for e-procurement in developing countries. For example, low organizational capabilities, low level of human capital, traditional processes and repetition of tasks, lack of employee motivation to learn about new system, low organizational support, lack of reward, knowledge hoarding behavior, lack of information sharing about the benefits of technology are some of the hurdles which increased the adoption of e-procurement in SMEs of developing countries (Abor & Quartey, 2010; Abed et al., 2015; Elsmami, et al. 2017; Rahayu & Day, 2015; Kurnia, et al., 2015). Other studies have documented that lower level of financial funding, weak marketing communication strategies, high level of products price, low reach to maximum customers, low level of suppliers and negotiations options, lack of human capital and technological competencies, and lack of employee and organizational support for new technology are more prominent barriers which can negatively influence the adoption rate of new technology in SMEs of developing countries (Abor & Quartey, 2010; Abed et al., 2015; Pandya, 2012; Taiwo, et al., 2012). These challenges/barriers have decreased the level of profitability, productivity, efficiency and effectiveness of SMEs. Therefore, the implementation of e-procurement is always

remained hot topic especially in the perspective of SMEs in developing countries. Therefore, present study aims to address which are the barriers that negatively influence the transformation of traditional procurement to e-procurement system for SMEs in Pakistan.

## RESEARCH METHODOLOGY

### Research Paradigm and Approach

Research paradigm can be determined based on epistemology, ontology, and methodology positions (Creswell, et al., 2007; Creswell et al., 2006). According to Creswell et al. (2007), the understanding of research paradigm is important because it provides knowledge how the research objectives can be addressed. Present study is exploratory in nature because there is rare literature available regarding the challenges of e-procurement adoption in the perspective of SMEs of developing countries. Previous studies have indicated that the level of e-procurement adoption and employees support vary between private to public organization, developed to developing countries, and large organizations to SMEs (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017). Therefore, researchers cannot implement universal solution and e-procurement implementation strategies within the same sector of SMEs (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017).

Researchers have suggested that interpretive methods are more suitable especially when researcher aims to understand problems in-depth with the purpose to give fruitful recommendations (Charmaz, 2005; Trauth, 2000; Lyon, et al., 2015). Furthermore, these studies have also highlighted that qualitative methods have required researcher involvement for understanding social meaning, local meanings, cultural and institutional setting, employee and management perception (Charmaz, 2005; Trauth, 2000; Lyon, et al., 2015). According to Andrews (2012) and Naeem (2019), social constructionists can easily understand the local context, cultural and social realities, religion, organizational setting, and other micro and macro variables which directly or indirectly influence the adoption of new technology. Present study aims to offer a research framework which can highlight the challenges of traditional procurement system as well as the suggest how SMEs can implement e-procurement using inductive reasoning approach. The Figure 1 is adopted from Naeem (2019) study with the purpose to give the quick view of “*ontology, epistemology, and data collection approach*” for this study (See Figure 1).

### Population and Sampling

The advent and rise of SMEs have increased the level of job opportunities, purchasing power, GDP contribution, and social development (Rahayu & Day, 2015). However, many studies have highlighted that SMEs of developing countries are far away to adopt e-commerce technologies therefore these SMEs are facing challenges to get effective utilization of resources (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017). Furthermore, these studies have also highlighted that employee and organizational readiness for technology adoption is low in developing countries. Present study has selected the SMEs of textile sector because it is one of largest manufacturing sector as well as have maximum contribution in the GDP of Pakistan (Textile Industry of Pakistan, 2018). Therefore, current study has selected the five SMEs of textile industry of Pakistan.

The purpose to select five SMEs is to select the rich information cases which can provide valuable data as per the proposed objectives of this study. Many studies have used semi-structured interview and thematic analysis method therefore these studies have suggested that 20 to 30 participants are appropriate sample size (Aslam, et al., 2018; Naeem 2019; Muqadas et al., 2017). Present study has selected the sample of 45 participants from five SMEs of textile sector. The study has selected eight respondents from each SME. These participants have key designations therefore they can better assess the traditional procurement challenges and e-procurement implementation strategies for targeted SMEs. These participants are procurement managers, general managers, HR managers, marketing managers,

Figure 1. Ontology, epistemology, and data collection approach



staff, and IT managers of SMEs. The selected participants have extensive practical experience as well as willing to provide research data for this study.

### Data Collection and Analysis

The study has selected semi-structure interview because there is no need to follow specific pattern and researcher can add/delete interview questions with the purpose to capture maximum information related to proposed objectives (Barriball and While 1994; Kallio, et al., 2016). The semi-structured interview method is useful to address the issues of self-generated validity as well as offers the rich insights for exploratory study design (Galletta, 2013; Kallio, et al., 2016). There are multiple interview questions which have been asked from the procurement managers, general managers, HR managers, marketing managers, staff, and IT managers of SMEs (see the Appendix). These semi-structured interview questions have been constructed based on existing literature review and in the local context of SMEs (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017).

The answers of interview questions have been recorded with the purpose to extract exact meanings and context during the transcriptions. Thematic analysis is used because it is appropriate method to provide rich insights in form of themes, codes, and keywords (Nowell et al., 2017; Maguire & Delahunt, 2017). Furthermore, these studies have indicated that thematic analysis is most appropriate especially when researcher want to identify similar pattern from collected data. Present study has followed the guidelines of Braun and Clarke (2006) with the purpose to conduct thematic analysis properly. The author of this study has good awareness about social and local meanings of collected data therefore he has identified most common patterns by extracting common keywords for this study. By following the guidelines of Braun and Clarke (2006), the study has given names to main themes and sub-themes with the purpose to write meaningful research report. There are multiple keywords

are identified with the purpose to gather and given appropriate name to main themes and sub-themes (See Table 1 and 2). The study has finalized two main themes: adoption challenges of e-procurement in SMEs; and organizational readiness in the adoption of e-procurement system for SMEs. There are seven sub-themes: complexity and formalization, formal and informal linking structures, financial and strategic integration, industry characteristics, technology infrastructure, organizational slack and size, system openness and Interconnectedness (See Table 1 and 2).

## FINDING AND ANALYSIS

The outcomes of the interviews highlighted various findings such as, how traditional procurement system is consuming more time, cost, employees' efforts, and offering lower level of efficiency, transparency, effectiveness, and productivity. There are several themes that are extracted after conducting the successful interviews with general manager, HR manager, marketing manager, IT

**Table 1. Adoption challenges of e-procurement in SMEs**

Theme	Definition	Sub themes	Keywords
Adoption challenges of e-procurement in SMEs	Organizational abilities and methods constrained relate to the way that do procurement, activities, or events are planned and arranged in SMEs of Pakistan	Complexity & Formalization	Manual invoices, bids, contracts, and ledgers. High repetition of work High administration costs Following traditional working procedures More employee efforts File records in storeroom Lack of technology usage Low privacy of supplier and customers Complications to gather information from old records Traditional information exchanging with suppliers
		Formal and informal linking structures	Favoritism for some supplier Issue of historical data analysis Access to few local suppliers. High chances for corruption Lower level of profit One-way communication Lack of information in system Issue of information processing limited employees understanding limited organizational experience
		Financial and strategic integration	Lack of financial resources. Tough procedures for the approval of loans Loans on high interest rate support for SMEs Lack of e-procurement system awareness Lack of functional coordination Lack of tactical coordination Organizational coordination complexity
		Industry characteristics	Limited knowledge about e-business systems Skills shortage Low technology use of trading partners, Lower level of IT professionals High level of salaries demand Obsolete education system Lack of university course Cost focused competition Lack of government technological intention
		Technology infrastructure	Limited organizational technology use Absence of technological intention Lack of technological skills Minimum investment in IT training Traditional communication processes Traditional data storage, reporting and analyses

Table 2. Organizational readiness in the adoption of e-procurement system for SMEs

Theme	Definition	Sub-themes	Keywords
Stakeholder readiness in the adoption of e-procurement system in SMEs	Exploring factors which are important to enhance motivation and readiness for adoption of e-procurement system in SMEs	Organizational slack and size	Technical skills development culture Employees motivation Arrange training session, seminars, and workshops for skills improvement To management support Interactive communications Training of English as a second language Employees ability Innovative communication system Advance data storage and presentation Employees motivation IT based management system IT based stock and sale management system
		System openness and Interconnectedness	Prepare feasibility report. Discuss the challenges of traditional system for creating awareness among employees. Awareness e-commerce technologies Innovation welcoming culture Routine of training, workshops, information session. Joint efforts against uncertainty Existing debate e-procurement system. Awareness of e-procurement An open-door office policy Open door innovation Transparent financials Open meetings Idea welcoming culture Opportunities to learn and use new skills

manager, operational manager, procurement manager, and staff of relevant departments and processes. Furthermore, I have presented the themes, interviews responses, and detail discussion about what are current hurdles on the adoption of e-procurement system and how these hurdles can be removed. During interview and details discussion, I have found that how employees are wasting most of their time when they are using limited latest technology and more focused on paper-based system environment. It is also found that how they are doing repetitive tasks which ultimately negatively influence the efficiency, effectiveness, profitability, and operational procedures of SMEs. The detail of interviews and related discussion has been given below:

### Main Theme 1: Adoption Challenges of E-Procurement in SMEs

#### Sub-Theme 1

Traditional complexity and formalization enhance operational ineffectiveness:

*We provide most of the required information on paper and telephone to suppliers and other stakeholders. Our procurement process has many drawbacks such as time consuming, slow order processing, conventional process that contains many small and repetitive tasks, rigorous and unimportant paperwork for writing contracts, approvals, negotiations and bids. The procurement processes are expensive because it is taking greater employee's efforts, admin cost, plenty of paperwork and time. However, we are not in position to purchase immediately e-commerce technology due to the limitation of human, financial, electrical, and security issues. (Procurement manager)*

*Another employee A has shared that we have spent a lot time to make payment by cheques and letter of credit. Most of our suppliers and customers are local so sometimes we are dealing with direct cash payments and maintaining manual ledgers that are time consuming and repetitive procedures. I must write invoices, bills, bids, contracts, and ledgers on printed and plain papers. These filled papers are required signatures from departmental procurement manager, finance manager, and general manager. Sometimes, these written manual papers need many revisions, repetition of signatures, and final approval from authorities. This lengthy process can be taken more than a week. It is time consuming process because I have to follow the predefined and repetitive processes for successful completion of work. (Employee C)*

*I think..... I spent my most of time to search old paper-based letters related to invoices, bills, bids, contracts, and ledgers. I have to follow the writing, pattern, and information of previous approved things so that the chances of mistakes can reduce. Sometimes, it took so much time to find out previous approved letter from storeroom related to specific supplier. (Employee E)*

*According to employee B, it is my duty to save every written and approved letter into manual files. Sometimes, I must revise written letter four to five times because every signing authority requires few changes in wording as per their experiences. We have manual papers work of more than forty years. Sometimes we are unable to find the required files due to huge amount of saved data into manual drawers of storeroom. There is less usage of informational technology which has become reason to complete work by consuming more time.*

The participants have shared that they are still using traditional processes (i.e. paper based work and traditional stores) which have increased the administration and operational costs. For example, these SMEs are using paper-based ledgers, contract, bids, bills, and invoices which have increased the stationery cost and employee efforts. Employees are more involved to create and store manual files which have increased the wastage of financial and non-financial resources. Furthermore, the traditional working methods have fostered low level of employee abilities, level of motivation, and opportunities therefore the knowledge sharing and intention to use e-procurement system is also decreased. The participants have shared that repetition of tasks have decreased the level of efficiency, effectiveness, and operational excellence among SMEs. As a result, SMEs are enjoying lower level of profitability and growth rate.

### **Sub-Theme 2**

Formal and informal linking structures and its impact on procurement system of SMEs:

*Employee M has argued that we have limited use of informational technologies and other latest system. Most of our employees have lower level of qualification and high level of experiences in obsolete working environment. Due to lower level of qualification, they have limited knowledge about new advent and rise of informational technologies and their benefits such as interactive communication and relationship building.*

*E-procurement is a tool which is cost effective as it minimizes the cost of communication, cost of transaction and other ancillary costs such as paper usage, clerical work and expensive methods of communication. Those SMEs where sales are still in their infancy stage, the cost can be higher and may also be out of reach at times; e-procurement in such instances can be cost effective for such SMEs and can increase their business in relatively shorter period of time. E-procurement is generally tailored for western markets as the technology is also emerging in those markets. However, adopting*

*it in Pakistan will bring the benefits to Pakistani market too where SMEs are struggling to control the level of cost. (Employee I)*

*The transparency can be improved by e-procurement as the collusion among bidders is reduced and since bidding information is widely available therefore the corruption is being eradicated. The monopoly of local firms is also broken as large number of SMEs can also participate through e-procurement. Further, the corruption can be reduced by making the information visible to everyone. (General Manager)*

*We are not frequently involved in two-way communication during the completion of paper-based purchase orders. We are just following the orders, rules, regulations, and predefined given procedures as given by the higher authorities. Sometimes, we offered the contracts to specific supplier as per the recommendation of our immediate boss that raised the question on the transparency of that contract. (Employee J)*

*Sometimes, we have focused on minimum or fixed prices with compromising on the quality of raw material from suppliers. With predetermined prices and fixed conditions of contract, there is minimum margin to entertain any supplier requests about material and also fewer chances to build healthy relationship. During this whole process, due to predefined contractual terms, there is limited level of interactive communication. Sometimes, suppliers are hesitating to develop long-term relationship with us. (Operational manager)*

The participant has shared that how the lower level of education and awareness about e-procurement system increased the challenges for SMEs. The participants are agreed that management of SMEs did not create any plan about what organizational capabilities and competencies are required to convert the traditional procurement into e-procurement system. They have shared that lower level of internet use and speed, low level of computer use, and lack of motivation to use new technology are some of prominent barriers which created hurdles in the adoption of e-procurement system. A participant has shared that how the traditional procurement system is unable to promote transparency and accountability because the contracts are assigned based on favoritism. Furthermore, the low level of information about suppliers have decreased the chances of low operational cost for SMEs products which ultimately negatively influenced the profitability and growth rate. It is found that employees have lower level of information about e-analysis, e-payment system, e-purchasing, e-sourcing, and e-tendering which increased more challenges in the adoption of e-procurement system. These SMEs have to minimize the procedures, rules, regulations, and orders with the purpose to reduce the delaying time as well as timely decision making for new technology. The adoption of e-procurement system can enhance the level of transparency, effectiveness, accountability, profitability and growth of SMEs.

### **Sub-Theme 3**

Financial and strategic integration and their impact on e-procurement system in SMEs:

*According to IT manager, we have limited financial budget and a lack of government support to bring new information technologies at workplace. Although we are considering different loans and other borrowing options to bring new technologies, but we are also hopeful that new government will take necessary step to offer loan at minimum interest rate. Government support and trainings about new information-based technologies have become essential to gain competitive advantages across the world. It is also a need of time to redefine the rules and regulations about the security of e-payment system so local suppliers can show their trust in e-transaction system.*

*Employee L has argued that we did not provide any information regarding the new developments in our area. We have not much knowledge about e-procurement system and how it works. If management will organize information sessions about the benefits and competitive advantages of that system, then more employees show their level of support for new changes.*

*Although our SME has limited financial budget as well as availability of other resources, but we are planning to bring automated system to improve the efficiency, effectiveness, and productivity. We are thinking to conduct sessions on e-procurement system so that employee can know about the benefits of e-procurement system. By using this system, we can enhance our knowledge exchanging capabilities as well as organizational effectiveness. (Assistant operational manager)*

Participants have shared that financial and strategic integration is one of the main challenges in the adoption of e-procurement system for SMEs. For example, SMEs have not enough financial resources as well as human capital which can generate and publish financial reports with the purpose to explore more financial loans/investments for SMEs. As a result, both banks and private investors are not ready to offer loan options. Furthermore, the absence of financial reports raised the questions over the transparency and accountability process of SMEs in Pakistan. Furthermore, it is also found that lack of government support and corruption are the major reasons which directly and indirectly influence the SMEs development and growth. For example, the Pakistani government has taken more loan and these loans have been used by corrupt politicians for their personal objectives. As a result, the currency value has decreased which also decreased the exports and imports of these SMEs. Therefore, participants have shared that the Pakistani government should provide more loan options as well as invest in training activities which can enhance the knowledge about e-commerce models.

#### **Sub-Theme 4**

Industry characteristics and their influence in the adoption of e-procurement system in SMEs:

*Government and IT related institutions are still not focusing much on giving incentives to SMEs. The terms and conditions of financial institutions for SMEs are difficult and can rarely be met with ease. It is imperative that such rules are being relaxed so that smaller firms can also flourish. Further, there are still many rural areas where e-procurement cannot be reached due to lack of IT infrastructure. Therefore, it is also vital that the government must focus to develop IT infrastructure. (Employee F)*

*General Manager also discussed the concerns about e-payment system like recently there are many cybercrimes are occurred in Pakistan. Our government, law enforcements agencies, and the technical staff of banking system are not fully capable to handle these cybercrime attacks. The one of the main examples is more than 6 million dollars are stolen recently from the Islamic bank of Pakistan. Therefore, government has to create some intensive security measures to protect both buyers and sellers. Further, our educational programs are not very effective and unable to produce those people which can actively control the cybercrime in Pakistan.*

*I think..... most of the staff members have limited information regarding what is e-procurement system and how we can reduce our time and costs by using this information technology. Now we are conducting meetings regarding how we can offer product to customers at lower cost by reducing operation costs in terms of time, efforts, traditional paper based lengthy processes, and by improving the level of transparency. (General Manager)*

Participants have shared how credit, capital, financial, technology and human constraints are some of major SMEs characteristics that raised challenges in adoption of e-procurement system.

For example, it has found that Pakistani government could not focus to develop educational content which can enhance the level of knowledge and awareness about the use of e-commerce technology. It has found that cybercrime attack, low government focus, lack of legislation for cyber-crime, and lack of financial borrowing options are the major hurdles in the adoption of e-procurement system. Therefore, government, management of SMEs, financial institutions and other stakeholders have to create better action plan with the purpose to ensure the security of e-payment system with the purpose to fully adopt the e-procurement in SMEs. The government has to create more support so that these SMEs can get more borrowing options as well as create trust among the customers regarding the security of e-payment system.

### **Sub-Theme 5**

Technology infrastructure and its impact on the adoption of e-procurement system:

*According to HR manager, the limited technology use, lack of technological skills, and limited investment in IT have increased the challenges for adoption of e-procurement system. The support by government and other financial institutions is very low for SMEs as these institutions are focused to support bigger corporations in the hope that they would generate employment for more people as compare to SMEs. Due to this reason, the SMEs face difficulties regarding e-procurement technology. More support is needed for upgrading the technology and infrastructure to support e-procurement. It is problematic to hire IT staff which is professional because they demand high salary. With the adoption of e-procurement the businesses are able to minimize their expenditure which they otherwise incur on staff.*

*General Manager of SME argued that we still using traditional communication process, data storage, reporting, and analyses method which have increased more challenges to adopt updated technology. I think.... our SME has to build mechanism regarding how we can increase knowledge and awareness about the benefits of e-procurement system.*

*According to employee F, it is more suitable to build training and knowledge sharing programs by investing in seminars, meetings, conferences, skills development programs. I believe... low level of technology skills is the major reason to the absence limited use of e-procurement among SMEs.*

Participants have shared that limited technology use, low level of employee intention towards technology adoption and use, low investment in IT training, one-way communication style, traditional data storage and reporting are some of major features of traditional procurement system. Therefore, participants have shared that more meeting, knowledge sharing sessions, training and development activities, awareness programs, and seminars can enhance the level of awareness about e-procurement system. The advance procurement system can enhance interactive communication, useful data and decision making, relationship building, operational efficiency, transparency and accountability in SMEs of Pakistan.

## **Main Theme 2: Organizational Readiness in the Adoption of E-Procurement System for SMEs**

### **Sub-Theme 1**

Organizational slack and size can foster e-procurement system in SMEs:

*I agree that most of the time our staff is doing repetitive tasks which has decreased their intention to learn new things. There is need to conduct more motivational and training sessions to enhance the level of skills of staff members. I have given proposal to CEO regarding shifting of important work*

*to automated system so that we can cut down our higher level of costs. We are continuously involved in discussion to finalize these decisions related to advance level of practices and systems. However, cultural inertia is big issue to implement new changes in our SME. (Procurement manager)*

*Another employee K discussed that how they are using traditional money receiving and transferring tools such as cheques, direct cash handling, and letter of credit. Due to recent frauds and scams in banks, her department is trying to rely less on banking transactions and more dependent to handle clients and supplier's information within the department. She acknowledges that it has enhanced the cost, usage of papers, and efforts of employees but they have no trustworthy alternative until unless government and banking organizations will take sufficient steps to secure and protect information. It ultimately increased the cultural inertia to adopt new practices and technologies.*

*I think... we have most of the staff that is less interested to use new technologies in their routine work. They feel easier to complete their work by using paper based manual system. If management will plan to bring latest procurement system then these employees need trainings, workshops, and frequent face to face interactive communication. Management can encourage their level of motivating by offering more reward if they enhance the level of skills and competencies. These advance technologies can improve the level of communication among all stakeholders. (Assistant HR manager)*

*According to general manager, the IT based management system and IT based stock and sale can enhance the profitability of SMEs. The adoption of e-procurement system can foster innovative communication system which is useful to information and knowledge sharing in SMEs.*

*Operational manager has admitted that most of the staff members are not interested to work on e-procurement system and other advance technologies. But he also shared that staff members showed their intention to adopt advance practices and technologies if SME will offer training, learning workshops, career development opportunities, and more reward to learn new things. He said that most of the time I am involved in doing repetitive tasks which has decreased my intention and enthusiasm to learn new things.*

*I think more training, workshops, information session, incentives, organizational support, knowledge sharing, and discussion about perceived benefits of e-procurement can create readiness to adopt e-procurement system. One of the greater cultural challenges for SME is the behavioral perception and characteristics of employees, management, and suppliers for adopting the e-procurement. The cultural inertia is further worsened by the lack of technical skills and lack of communication in English language (HRM manager).*

Participants have shared that how the financial, human capital, and technology competencies are underutilized. Employees are paid for traditional and repetitive tasks which have limited learning and career development opportunities. Most of the employees have low education and more experience related to traditional work therefore they have high resistance towards the adoption of e-procurement system. Both management and employee are agreed that these SMEs have to conduct more workshops, training, organizational support, information session, incentives, knowledge sharing, and discussion with the purpose to highlight the benefits of e-procurement system. These information sharing sessions and motivational factors can reduce the level of culture inertia as well as employee resistance towards the adoption of e-procurement system. It is important to share with employees that how the new technology can foster speed and timely completion of tasks. Many studies have highlighted that lower level of information sharing decreases the employee and organizational readiness towards technology and other workplace changes. Therefore, it is suggested that top management must share

how the use of e-procurement system can bring benefits both at personal and organizational level. The information about productive benefits can enhance the employee motivation and intention towards the adoption of e-procurement system.

### *Sub-Theme 2*

System openness and Interconnectedness can enhance the adoption of e-procurement system:

*Procurement departmental manager has discussed that we need training regarding how we can operate the e-procurement system. In training, there is a need to explain what e-sourcing, e-analysis, e-tendering, e-purchasing, and e-payment system are and how it can more effectively work than traditional procurement system. Our SME has to offer reward or incentives to increase employee motivational level regarding adoption of e-procurement.*

*According to General Manager, I think it is a need to time to bring some positive initiatives such as an open-door office policy, open door innovation, open meetings, transparent financial ideas, idea welcoming culture, and opportunities to learn new skills. These are important factors to create more system openness towards new technologies.*

*According to procurement manager, I think.... SMEs have to conduct open meetings and interactive discussion with the purpose to create awareness about e-commerce technologies. These open meeting and discussion can create innovation welcoming culture of new technologies. I think.... all the stakeholders have to do joint efforts against uncertainty and bring more workplace changes.*

*According to operational manager, it is important to communicate with staff members how e-procurement system can manage the data related to supplier and customer enquiries. It can improve the supply chain management system of a SME. It is important to tell them that answers given to the customer and the one given by customer is not swiftly exchanged in the absence of e-procurement system. E-procurement makes it possible to exchange feedback resulting in greater customer satisfaction. It is vital to achieve customer satisfaction to maintain competitiveness in the market. E-procurement makes it possible that customers are delivered the right products in time which increases the customer satisfaction. This type of information exchange related to e-procurement system can create employee and organizational readiness to adopt this system.*

*According to General Manager, we have decided to overcome the issues of traditional e-procurement procedures by implementing the e-procurement. We are arranging motivational and informational based sessions regarding what are the benefits of e-procurement system and what are the key skills that are required to effectively adopt this system. We are also taking the services of an expert to discuss these changes with employees to build positive support and intention to learn. There are further hurdles in this regard such as licensing, upgrading the IT infrastructure to meet the e-procurement requirements, and upgrading the software's. If all layers of management cooperate, collaborate, and provide support then it is easier to adopt new practices and technologies.*

The participants have highlighted how system openness and interconnectedness can enhance the adoption of e-procurement system. Participants have shared that open-door office policy, open door innovation, open meetings, and idea welcoming culture are some of the important factors which can enhance the employee and system openness towards e-commerce technology. It is important to shared how the use of e-procurement system can foster more opportunities for suppliers, improve ordering process, decrease material costs, improve product quality, foster two way communication, improve organizational capabilities, reduce turn-around time, and improve transparent procurement procedures.

The results have highlighted that it is important to share the information with employees regarding how the use of e-procurement system can address the enquires of customers as well as helpful to build interactive communication and transparency with suppliers. Participants have shared that information sharing about rewards and productive benefits of e-procurement can enhance the openness to adopt this system. The participants have shared that open meetings and interactive sessions can provide information about e-tendering, e-sourcing, e-purchasing, e-analysis, and e-payment system.

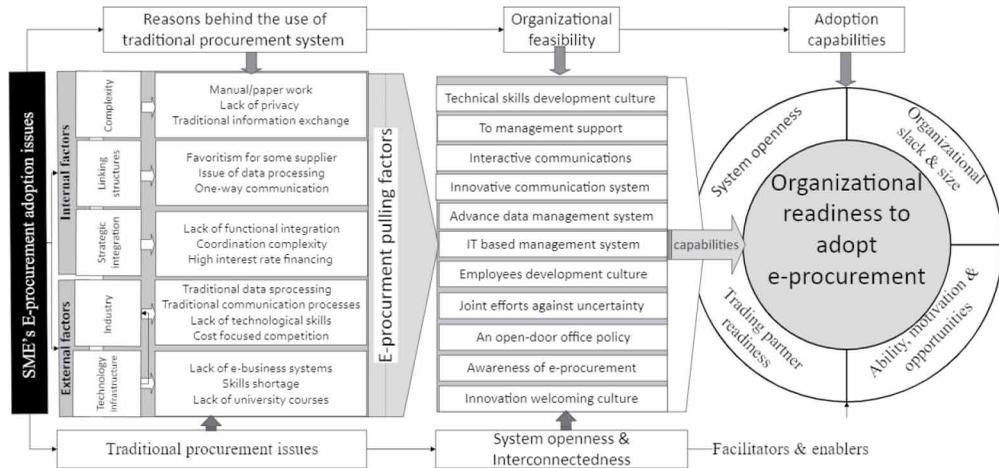
### **E-Procurement Organizational Capability (EPOC) Model**

The E-procurement organizational capability (EPOC) have highlighted the traditional procurement challenges, organizational feasibility and adoption capabilities, system openness and interconnectedness, facilitators and enablers of e-procurement for SMEs. The traditional procurement system has various challenges related to complexity and formalization, formal and informal linking structures, financial and strategic integration, Industry characteristics, and technology infrastructure for SMEs. According to Rogers (1995), diffusion of innovation (DOI) model highlighted the importance of internal characteristics of organizational structure which can influence the adoption and use of technology. These features of organizational structure are complexity, formalization, organizational slack and size, interconnectedness and system openness. The complexity and formalization mean SMEs are still following the traditional working methods (i.e. manual bids, invoices, leaders, and contracts) which have enhanced the employee efforts and operational costs. Furthermore, these traditional working procedures are unable to foster interactive communication and information exchange between stakeholders. The organizational slack and size mean SMEs invested more time and efforts in traditional working procedures. Therefore, these SMEs are unable to take benefits from human, intellectual and technological capital. The results reveal that employee and structure of SMEs are not open to accept e-commerce technologies therefore it has important to invest more resources in open-door office policy, open door innovation, open meetings, and idea welcoming culture.

The Ability, motivation, and opportunity (AMO) framework is given by Appelbaum et al. (2000) for understanding how human capital can play role in the adoption of new system in the organizational workplace. The findings have revealed that limited employee education and skills, lack of employee motivation and training, lack of investment in training programs, lack of rewards are some of main hurdles that have enhanced the obstacles with respect to develop human capital for SMEs. It has found that traditional working procedures and repetition of manual tasks have decreased the employee learning opportunities as well as employee motivation to adopt e-commerce technologies for SMEs. Therefore, it is required to invest more resources in workshops, training, information session, incentive, knowledge sharing, and discussion with the purpose to develop employee abilities, motivation, and opportunities. The results reveal that it is important to share how the use of e-procurement system can foster more opportunities for suppliers, improve ordering process, decrease material costs, improve product quality, foster two way communication, improve organizational capabilities, reduce turn-around time, and improve transparent procurement procedures. The information sharing about the benefits of e-procurement can enhance the employee motivation towards the adoption of e-procurement system.

The third model is technology-organization-environment (TOE) framework which introduced by Tornatzky and Fleisher (1990). The TOE framework has offered three factors (i.e. technology, environment, and organizational context) that can influence the adoption of e-procurement in SMEs. It is found that one-way communication, favoritism for few suppliers, lack of supplier and customer database are major issues therefore SMEs cannot build positive relationship with internal and external stakeholders. The technology context means that the adoption of e-procurement system can foster efficiency, transaction time, customer database, low operational and admin costs, supplier database, and online information for better decision making. The environment context such as government and banking organizations have to play positive role with the purpose to enhance more borrowing options for SEMs development and growth. Finally, the organizational context means how much

Figure 2. E-procurement organizational capability (EPOC) model



top management and staff are ready to accept e-commerce technology. The results reveal that both managers and employees are ready to accept e-procurement system if they find more open meetings, interactive discussion, reward, and proper information sharing (Figure 2).

## DISCUSSION

The existing literature has highlighted that there are differences in culture, environment, employee perceptions, organizational capabilities and resources, human capital, and technological competencies which can either positively or negatively influence the adoption of e-commerce technologies (Altayyar et al., 2016; Rahayu, & Day, 2015; Elsmami, et al., 2017). Other studies have revealed that SMEs of Asian countries have more challenges to adopt e-procurement due to low level of human capital, financial resources, and technological competencies (Rahayu, & Day, 2015; Faisal & Talib, 2017). The SMEs are remained attractive for researchers because they can enhance the level of job opportunities, purchasing power, GDP contribution, and social development (Rahayu, & Day, 2015; Elsmami, et al., 2017). Present study has chosen the textile sector SMEs because they are still using traditional procurement system therefore the level of efficiency and effectiveness is decreased. There is scant research is available regarding why SMEs are still using traditional procurement system. It is important to understand which are the barriers that negatively influence the transformation of traditional procurement to e-procurement system for SMEs. Present study aims to highlight these challenges with the purpose to suggest how the top management of SMEs can bring the e-procurement. The findings of this study may fruitful for SMEs to increase organizational capabilities and technological based competencies in the context of a developing country.

Findings have highlighted the challenges of SMEs with respect to complexity and formalization, formal and informal linking structures, financial and strategic integration, Industry characteristics, and technology infrastructure. For example, it has found that manual bids, invoices, ledgers, and contracts are taking more employee efforts, operational and administration cost, and organizational slack. The traditional working system have decreased the opportunities to increase employee abilities, employee learning, and employee motivation towards e-commerce technologies. It has found that most of the employees are feeling comfortable to work with manual methods such as manual bids, invoices, ledgers, and contracts. Findings showed that limited technology use, low level of employee intention towards technology adoption and use, low investment in IT training, one-way communication style, traditional data storage and reporting have negatively influenced the SMEs growth, development, productivity,

and profitability. The existing literature has confirmed that there are multiple SMEs which are still using traditional procurement system and unable to manage the over-head cost, transaction time, inventory management cost, and purchasing cycle specifically in developing countries (Gunasekaran et al., 2009; Rahayu, & Day, 2015; Faisal & Talib, 2017).

The transparency and accountability of SMEs is one of the major hurdles to enhance financial and strategic integration. For example, SMEs have not enough financial resources as well as human capital which can generate and publish financial reports with the purpose to explore more financial loans/investments for SMEs. Albrecht et al. (2005) have argued that both transparency and accountability are the major benefits in the adoption of e-procurement system. As a result, both banks and private investors are not ready to offer loan options. Furthermore, the absence of financial reports raised the questions over the transparency and accountability process of SMEs in Pakistan. It is found that more cybercrime attack, low government focus on SMEs, lack of legislation for cyber-crime, and lack of financial borrowing options have increased challenges in adoption of e-procurement system for both internal and external stakeholders. Therefore, the top management of SMEs have to recruit human capital which have skills and motivation to convert traditional system into online system. The availability of financial reports, supplier database, customer database, and technological competencies can create more system openness and interconnectedness for e-commerce technologies. The government has to introduce more financial borrowing options because limited financial resources is one of the major hurdles to adopt e-procurement system. The extent of literature is confirmed that lack of financial resources, limited human capital, and low level of technological competencies are the major hurdles for technology adoption in SMEs (Abor & Quartey, 2010; Abed et al., 2015; Elsmami, et al. 2017; Rahayu & Day, 2015; Kurnia, et al., 2015).

The study has supported the main themes, sub-themes, and keywords using the support of three theories and framework (DOI, AMO, and TOE). For example, DOI has highlighted that how the adoption of e-procurement system can decrease the administration and operational costs, better handling to the demand of customers, decrease the supply material cost, foster the effective inventory system and quality of products, build the focus on main organizational competencies and capabilities. Therefore, it is suggested to conduct more seminars, open meetings, and knowledge sharing sessions because it can enhance the employee motivation and support to learn and adopt e-procurement system. The investment in trainings and more rewards can enhance the employee's motivation to improve their abilities and skills. It is important to discuss the productive benefits (i.e. foster efficiency, transaction time, customer database, low operational and admin costs, supplier database, and online information for better decision making) because it can enhance the information sharing as well as decrease the level of resistance during the adoption of e-procurement system. Finally, the government, banking organizations, and SMEs have to create more awareness about the benefits of e-commerce technologies because it can save the resources as well as improve the SMEs growth and profitability rate.

## CONCLUSION

Present study has found that the SMEs of textile sector are using traditional procurement system which have reduced the opportunities to enhance employee learning, employee abilities, work performance, efficiency and effectiveness. It has found that traditional procurement system has reduced operational excellence, productivity, performance, and effectiveness of SMEs. Findings highlight that manual work required more employee time, efforts, and resources. The manual working method and repetition of tasks are unable to promote transparency and motivation to adopt e-commerce technologies. It has found that manual work consumes more time, employees' efforts, ineffective utilization of resources, high operational and administration costs, and lack of online databases for interactive communication and better decision making. Findings reveal that these SMEs have limited human capital, financial resources, and technological competencies therefore these SMEs are unable to publish financial reports for enhancing the level of financial and strategic integration. It has found that more cyber crime and

lack of trust in e-payment system increased the challenges in the adoption of e-commerce technologies. Therefore, SMEs, government, and banking organizations have to collaborate and coordinate with the purpose to enhance the adoption of e-procurement system. Finally, the information sharing about the productive benefits of e-procurement can decrease the level of employee resistance and uncertainty. Furthermore, the knowledge sharing and training activities can enhance the employee motivation and abilities to adopt e-procurement system.

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

The present study is not free from limitations. For example, semi-structured interview method included the biasness of researchers because they can ask leading questions with the purpose to get rich insights (Aslam, et al., 2018). Further, the selection of non-probability sampling (i.e. purposive) is unable to provide the representation of selected sample therefore results are not generalizable to larger population. According to Aslam, et al. (2018), employee skills, motivation, perceptions, experiences, and intention towards the adoption of technology may vary between organization to organization, culture to culture, and developing to developed countries. Therefore, it is more suitable that future studies select multiple SMEs from different sectors with the purpose to get more rich insights in the context of developing countries. Although the study has offered e-procurement organizational capability (EPOC) model with the support of multiple theories, but researcher could not check the validity, reliability, and generalizability. Therefore, future studies can use the multiple data collection methods and sources with the purpose to check the validity of EPOC model.

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We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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## REFERENCES

- Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(6), 215–228.
- Alrousan, M. K., Al-Adwan, A. S., Al-Madadha, A., & Al Khasawneh, M. H. (2020). Factors Affecting the Adoption of E-Marketing by Decision Makers in SMEs: Evidence From Jordan. *International Journal of E-Business Research*, 16(1), 1–27. doi:10.4018/IJEER.2020010101
- Altayyar, A., & Beaumont-Kerridge, J. (2016). An Investigation into barriers to the adoption of e-procurement within selected SMEs in Saudi Arabia. *Journal of Business and Economics*, 7(3), 451–466.
- Andrews, T. (2012). What is social constructionism? *The Grounded Theory Review*, 11(1).
- Appelbaum, E., Bailey, T., Berg, P., Kalleberg, A. L., & Bailey, T. A. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Cornell University Press.
- Aslam, U., Ilyas, M., Imran, M. K., & Rahman, U. U. (2016). Detrimental effects of cynicism on organizational change: An interactive model of organizational cynicism (a study of employees in public sector organizations). *Journal of Organizational Change Management*, 29(4), 580–598. doi:10.1108/JOCM-12-2014-0231
- Aslam, U., Muqadas, F., Imran, M. K., & Saboor, A. (2018). Emerging organizational parameters and their roles in implementation of organizational change. *Journal of Organizational Change Management*, 31(5), 1084–1104. doi:10.1108/JOCM-08-2017-0300
- Barriball, K. L., & While, A. (1994). Collecting data using a semi-structured interview: A discussion paper. *Journal of Advanced Nursing-Institutional Subscription*, 19(2), 328–335. doi:10.1111/j.1365-2648.1994.tb01088.x PMID:8188965
- Beck, T., Demircuc-Kunt, A., & Levine, R. (2005). SMEs, growth, and poverty: Cross-country evidence. *Journal of Economic Growth*, 10(3), 199–229. doi:10.1007/s10887-005-3533-5
- Benabdelhafid, M. S., & Boufaida, M. (2015). The Need for Formal Compatibility Analysis in Web Service Choreography via an E-Commerce Application. *International Journal of E-Business Research*, 11(4), 1–16. doi:10.4018/IJEER.2015100101
- Bidgoli, H. (2010). *The handbook of technology management, supply chain management, marketing and advertising, and global management* (Vol. 2). John Wiley & Sons.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi:10.1191/1478088706qp063oa
- Charmaz, K. (2005). Grounded theory in the 21st century: A qualitative method for advancing social justice research. *Handbook of Qualitative Research*, 3, 507-535.
- Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The Counseling Psychologist*, 35(2), 236–264. doi:10.1177/0011000006287390
- Creswell, J. W., Shope, R., Plano Clark, V. L., & Green, D. O. (2006). How interpretive qualitative research extends mixed methods research. *Research in the Schools*, 13(1), 1–11.
- Davila, A., Gupta, M., & Palmer, R. (2003). Moving procurement systems to the internet: The adoption and use of e-procurement technology models. *European Management Journal*, 21(1), 11–23. doi:10.1016/S0263-2373(02)00155-X
- Eei, K. S., Husain, W., & Mustaffa, N. (2012). Survey on benefits and barriers of e-procurement: Malaysian SMEs perspective. *International Journal on Advanced Science, Engineering and Information Technology*, 2(6), 14–19. doi:10.18517/ijaseit.2.6.238
- Elsmani, R. M., Rahim, A. A., & Mohammed, A. M. (2017). A Review of the E-commerce Barriers Faced by the SMEs in Africa. *International Journal of Innovation and Business Strategy*, 7(1).
- Galletta, A. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication* (Vol. 18). NYU Press. doi:10.18574/nyu/9780814732939.001.0001

- Gunasekaran, A., McGaughey, R. E., Ngai, E. W., & Rai, B. K. (2009). E-Procurement adoption in the Southcoast SMEs. *International Journal of Production Economics*, 122(1), 161–175. doi:10.1016/j.ijpe.2009.05.013
- Hassan, H., Tretiakov, A., Whiddett, D., & Adon, I. (2014). Extent of e-procurement use in SMEs: A descriptive study. *Procedia: Social and Behavioral Sciences*, 164, 264–270. doi:10.1016/j.sbspro.2014.11.076
- Hsin Chang, H., Tsai, Y., & Hsu, C. (2013). E-procurement and supply chain performance. *Supply Chain Management*, 18(1), 34–51. doi:10.1108/13598541311293168
- Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. doi:10.1111/jan.13031 PMID:27221824
- Kanat, S., Abbasi, S. A., Peerzada, M. H., & Atilgan, T. (2018). SWOT analysis of Pakistan's textile and clothing industry. *Industria Textila*, 69(6), 502–510.
- Khan, A. A., & Khan, M. (2010). Pakistan textile industry facing new challenges. *Research Journal of International Studies*, 14(14), 21-29.
- Kurnia, S., Choudrie, J., Mahbubur, R. M., & Alzougool, B. (2015). E-commerce technology adoption: A Malaysian grocery SME retail sector study. *Journal of Business Research*, 68(9), 1906–1918. doi:10.1016/j.jbusres.2014.12.010
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education*, 9(3).
- Muqadas, F., Rehman, M., Aslam, U., & Ur-Rahman, U. (2017). Exploring the challenges, trends and issues for knowledge sharing: A study on employees in public sector universities. *VINE Journal of Information and Knowledge Management Systems*, 47(1), 2–15. doi:10.1108/VJIKMS-06-2016-0036
- Naeem, M. (2019). Uncovering the role of social media and cross-platform applications as tools for knowledge sharing. *VINE Journal of Information and Knowledge Management Systems*, 49(3), 257–276. doi:10.1108/VJIKMS-01-2019-0001
- Nawi, Roslan, Salleh, Zulhumadi, & Harun. (2016). The benefits and challenges of E-procurement implementation: A case study of Malaysian company. *International Journal of Economics and Financial Issues*, 6(7S).
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. doi:10.1177/1609406917733847
- Pandya, V. M. (2012, September). Comparative analysis of development of SMEs in developed and developing countries. In *The 2012 International Conference on Business and Management* (pp. 6-7). Academic Press.
- Rahayu, R., & Day, J. (2015). Determinant factors of e-commerce adoption by SMEs in developing country: Evidence from Indonesia. *Procedia: Social and Behavioral Sciences*, 195, 142–150. doi:10.1016/j.sbspro.2015.06.423
- Ramayah, T., Roy, M. H., Li, K. B., Jantan, M., Zbib, I., & Ahmed, Z. (2007). Type of procurement and operational performance: Comparing e-procurement and offline purchasing. *International Journal of Services and Operations Management*, 3(3), 279–296. doi:10.1504/IJSOM.2007.013093
- Ramcharran, H. (2013). E-commerce growth and the changing structure of the retail sales industry. *International Journal of E-Business Research*, 9(2), 46–60. doi:10.4018/jebr.2013040104
- Rogers, E. M. (1995). Diffusion of Innovations: modifications of a model for telecommunications. In *Die diffusion von innovationen in der telekommunikation* (pp. 25–38). Springer. doi:10.1007/978-3-642-79868-9\_2
- Tai, Y. M., Ho, C. F., & Wu, W. H. (2010). The performance impact of implementing web-based e-procurement systems. *International Journal of Production Research*, 48(18), 5397–5414. doi:10.1080/00207540903117915
- Taiwo, M. A., Ayodeji, A. M., & Yusuf, B. A. (2012). Impact of small and medium enterprises on economic growth and development. *American Journal of Business and Management*, 1(1), 18–22. doi:10.11634/21679606170644

Textile Industry of Pakistan. (2018). Available at: <https://www.ravimagazine.com/textile-industry-of-pakistan-an-analysis/>

Tornatzky, L., & Fleischer, M. (1990). *The Process of Technology Innovation*. Lexington Books.

Trauth, E. M. (Ed.). (2000). *Qualitative research in issues and trends: issues and trends*. IGI Global. doi:10.4018/978-1-93070-806-8

Vaidyanathan, G., & Devaraj, S. (2008). The role of quality in e-procurement performance: An empirical analysis. *Journal of Operations Management*, 26(3), 407–425. doi:10.1016/j.jom.2007.08.004

## APPENDIX: INTERVIEW QUESTIONS

- Q1: Why your SME is still using traditional procurement system?  
Q2: What challenges you have observed using traditional procurement system?  
Q3: Do you feel the need to shift from traditional procurement to e-procurement system?  
Q4: Do you think that your SME able to shift from traditional procurement to e-procurement system?  
Q5: Do you think that your employees, customers, and other stakeholders are aware about the benefits of e-procurement system?  
Q6: What specific resources you have required to adopt e-procurement system?  
Q7: What specific employee's skills and abilities are necessary to bring adopt e-procurement system in a SME?  
Q8: Do you think that your SME has enough financial and human resources which are necessary for e-procurement use?  
Q9: How you can increase the SME readiness for e-procurement system?  
Q10: How your SME can increase the openness and intention to adopt e-procurement system?

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