SMEDA Research Journal

Editor: Nadia Jahangir Seth

SMEDA Research Journal aims at publishing high quality research in the area of SMEs – the landscape of Pakistan’s economic establishments. The views expressed in the research papers are of the author(s) and should not be attributed to SMEDA. The accuracy of statements, findings or analysis of the contributions in the Journal is the responsibility of the Author(s).

All rights reserved. Reproduction is permitted with the consent of SMEDA. www.smeda.org.pk


For All Correspondence:

Policy & Planning Division
Small and Medium Enterprises Development Authority
4th Floor, Building No. 3, Aiwan-e-Iqbal Complex
Egerton Road, Lahore, Pakistan
Tel: (92-42) 111-111-456, Fax: (92-42) 36304926-7
e-mail: research@smeda.org.pk
Editors

Ms. Nadia Jahangir Seth, General Manager, Policy & Planning Division, Small and Medium Enterprises Development Authority (SMEDA), Pakistan

Dr. Naveda Kitchlew, Assistant Professor, Associate Dean Academics and Internationalization, University of Management and Technology (UMT), Pakistan

Editorial Advisory Board

Dr. József Poór, Director of Management and Leadership Program Szent István University, Hungary

Dr. Ronda Ansted, DMgt, MSW, International Development & Non-Profit Career Consulting

Dr. Tuğba Karabulut, Associate Professor, Istanbul Commerce University, Turkey

Dr. James (Jake) Pringle, Assistant Professor, Ted Rogers School of Management, Ryerson University, Canada

Dr. Perihan Iren, Assistant Professor, College of Business, Zayed University, United Arab Emirates

Ms. Nisha Malhotra, Senior Instructor (Tenured), Vancouver School of Economics, University of British Columbia, Canada

Mr. Christopher Conroy, Fellow, Organizational Theory, RMIT University, Australia

Dr. Atif Hassan, Associate Professor, Department of Management, University of Management and Technology (UMT), Pakistan

Dr. Ali Sajid, Professor, Lahore School of Management, University of Lahore

Dr. Dawood Mamoon, Associate Professor, School of Business and Economics, University of Management and Technology (UMT), Lahore, Pakistan

Dr. Ijaz Qureshi, Dean, Faculty of Management Sciences, University of Lahore

Ms. Nadia Jahangir Seth, Deputy General Manager, Policy & Planning Division, Small and Medium Enterprises development Authority (SMEDA), Pakistan

Mr. Abdul Rafay, Associate Professor, School of Business and Economics, Univeristy of Management and Technology, Pakistan

Technical Committee

Mr. Sami Ullah Bajwa, Assistant Professor / Assistant Professor, Director Center for Multidisciplinary Research, University of Management and Technology (UMT), Pakistan

Ms. Maryam Anas Ganaie, Assistant Manager, Policy and Planning Division, Small and Medium Enterprises development Authority (SMEDA), Pakistan
Contents

Entrepreneurial Orientation and SMEs’ Financial Performance, Testing the Role of Knowledge Creation And Top Management Team Characteristics: An Empirical Evidence From Southern Punjab, Pakistan
Professor Dr. Masood Ul Hassan, Asghar Iqbal, Sibta Shoaib 6

International Technology Transfer and Technological Capability Upgradation of Pakistan’s Small and Medium Enterprise (SME) Cluster(s)
Ahson Munir 43

Beneficiary Assessment Based Evaluation of SME Policy of Pakistan
Ali Sadiq 68
Foreword

Research is the foundation for developing policies at micro or macro level. In Pakistan, SME-focused research is vital for our economy as SMEs contribute an estimated 40% to GDP and constitute more than 90% of all enterprises. Credible research on SME sector is lacking in Pakistan, rendering the process of identification issues and challenges being faced by SMEs difficult. Thus, promotion of high quality research is imperative to assist policy makers in identifying the areas that require support.

In an effort to encourage researchers to focus on SME sector, Small and Medium Enterprises Development Authority (SMEDA) launched the SME Conference initiative in 2016, as a platform to promote and enhance collaboration between industry, academia and government. It is pertinent to note that academia is the key to establish a direct link between industry and researchers, so that, relevant and long standing issues of SMEs can be highlighted through research. Therefore, SMEDA collaborated with University of Management & Technology (UMT) to co-organize the 1st and 2nd SME Conferences.

The 3rd SME Conference was also organized in partnership with UMT and brought together SME representative bodies, academia, government departments, international development organization, financial institutions, SMEs, large scale enterprises, and researchers. Thematic areas of the Conference included; SME Policy & Research, Entrepreneurship and Startup Ecosystem in Pakistan, Sustainable Development, and China Pakistan Economic Corridor. The aforementioned topics were covered in five separate sessions, spread across the two day Conference. Researchers contributed to the conference by presenting their research papers. Amongst all research papers presented, the top ones were selected to be published in SMEDA Research Journal.

SME Sector is now being ranked in Pakistan as a priority sector due to its potential to support the government in achieving growth targets of the economy. SMEDA Research Journal is an effort to inspire researchers to produce high quality research in order to produce material that can be utilized to develop polices and strategies for SME sector. Achievement of our goal means that a solid research base will be created through this Journal which can facilitate in formulating future strategies.

Publication of SMEDA Research Journal was indeed a challenging task and I would like to thank the Editorial Advisory Board and all Reviewers of research papers. In addition, I would also like to thank SMEDA team who have worked tirelessly to make this publication possible.

Sher Ayub Khan
Chief Executive Officer
Small and Medium Enterprises Development Authority (SMEDA)
Entrepreneurial Orientation and SMEs’ Financial Performance, Testing the Role Of Knowledge Creation And Top Management Team Characteristics: An Empirical Evidence From Southern Punjab, Pakistan

Dr. Masood Ul Hassan
Professor
Department of Commerce Bahauddin Zakariya University, Multan
masood@bzu.edu.pk

Asghar Iqbal
Ph.D Scholar
Department of Commerce Bahauddin Zakariya University, Multan
asghariqbal88@gmail.com

Sibta Shoaib
MPhil Commerce
Department of Commerce Bahauddin Zakariya University, Multan
sibtashoaib@gmail.com
Abstract

Pakistan is one the emerging economies of Asia. It has shining figures about contribution of SMEs in economy like GDP & per capita Income, the whole economy is dependent upon about peace of productivity of SMEs. While talking about productivity, innovative is equally important both for large and small & medium enterprises. In developing economies like Pakistan, the role of innovation becomes most important and it becomes unavoidable to know about the factors encouraging innovation in country. In this context this study was aimed to examine the relationships among entrepreneurial orientation, knowledge creation process, top management team characteristics and firm performance using survey data from 165 entrepreneurs. Smart-PLS was used to test the direct effects of the entrepreneurial orientation, knowledge creation and top management team characteristics on firm performance. The results indicate that the significance of the direct effect of entrepreneurial orientation on firm performance, consequently, knowledge creation and top management team characteristics are also positively related to firm performance.

Key Words: Entrepreneurial Orientation, Knowledge Creation, Top management Team characteristics, Firm Performance, Smart-PLS, SMEs, Pakistan.
Introduction and Background

Small and medium sized enterprises (SMEs) symbolizes as a significant sector of the economies of both developing and developed nations (van Stel et al., 2005). This particular sector has been viewed as an essential mean for achieving economic growth by creating jobs and accelerating the pace of economic events in different countries across the globe. SMEs are accepted as a pivot on which economic expansion, job creation, poverty reduction and industrial development can be constructed (Okpara, 2011; Terungwa 2012). Development of SMEs sector of a particular country is indispensable for the growth strategy because they have capability to respond to the economic shock swiftly and their ability of jobs generation at the time when the large firm sector was going through a rapid turn down (Hashi & Krasniqi, 2011). In addition to this, SMEs does not only act as the motivating forces towards economic growth but also helps to accelerate the entire process of the economic development (Cravo, Gourlay & Becker, 2012).

Pakistan has approximately 4.2 million enterprises (Pakistan Economic Survey 2013-14). In Pakistan, SMEs represents about 90% of the total firms contributing over 30% to the GDP of the country, 25% to exports account as well as sharing 35% in manufacturing sector (Subhan, Mehmood, & Sattar, 2013). SMEs extend throughout the Pakistan with a major location in Punjab (65.4%), contribution by Baluchistan in happens to be the minimum (2.3%) while contribution by Khyber-Pakhtunkhwa is 14.3% and by Sindh is 18%. (Subhan, Mehmood & Sattar, 2013). Gradually, SMEs are considered more vital for economic expansion, it is now more significant to explore how small and medium firms can improve their performance to make sure their prolong existence in the unstable economic surroundings. To cope with these dynamic economic conditions firms are required to exhibit particular competencies. Due to this reason, entrepreneurship literature and strategic management suggests helpful concepts for the improvement of firm’s performance. A number of researches have provided verifications that
the relationship among these orientations or various grouping of these orientations or one of these orientations alone (Calantone et al., 2002; Kohli and Jaworski, 1990; Wiklund and Shepherd, 2005) can provide a basis of competitive advantage and high performance for organizations.

Entrepreneurial orientation that has become a focus of scholarly consideration (Kreiser, Marino & Weaver 2002; Covin & Lumpkin 2011; Covin & Slevin 1991; Covin & Wales 2012). After 90’s the entrepreneurial orientation (EO) concept has gained noticeable consideration in the research regarding entrepreneurship (Lumpkin & Covin 2011). Entrepreneurial orientation is defined as entrepreneurial organizational level activity (Kreiser, Marino & Weaver 2002; Covin & Slevin 1991; Covin & Wales 2012; Covin & Lumpkin 2011) and firm’s tendency to be innovative, to take risks and to be proactive (Andersén, 2010). Entrepreneurial orientation (EO) is a key element for organizational achievements (Lumpkin & Dess 1996), and has been found to have positive relation with performance of firm (Wiklund & Shepherd 2003; Zahra & Covin 1995). Specifically, firms are expected to get advantages by adopting and implementing entrepreneurial orientation (Shepherd & Wiklund 2005).

A number of studies have found that EO facilitates new ventures and small firms (Lussier, 1995), to outperform the competitors and increase performance of firm (Sirmon & Hitt, 2003; Lumpkin & Dess, 2001; Zahra & Garvis, 2000; Shepherd & Wiklund, 2005). Though, the outcomes of empirical studies regarding EO and firm performance relationship are diverse. These mixed empirical outcomes elevate the issue that whether EO is all the time a suitable strategic orientation or if its association with firm performance is more intricate. Lumpkin and Dess (1996) argued that the majority of the studies examining the individual consequences of entrepreneurial orientation on firm performance disregard the aspects that could possibly act as a mediator and strengthen the association of entrepreneurial orientation and performance of firm (Shepherd & Wiklund, 2005). Reacting towards vibrant and aggressive settings,
organizations require consistent relocation of entrepreneurial orientation into possible strategic actions to accomplish the firms' goals and attain better performance by considering the employment of knowledge creation process (Droge, Claycomb, & Germain, 2003; Lee & Choi, 2003; Teece, 1998). Knowledge creation process permits organizations to intensify knowledge rooted within the firm and transfer into operational actions to enhance performance, efficiency and create value for business (Nonaka & Takeuchi, 1995; Nonaka, Toyama, & Nagata, 2000; Nonaka & Konno, 1998). There is an obvious requirement in the literature for empirical researches specially, focusing on the individuality of the entrepreneur and top executives, as the owner's ethics, personal attributes and perceptions are accepted as significant attributes, particularly with regard to small and medium size firms (Miller and Le BretonMiller, 2014; Miller, 2011; Simsek et al., 2010).

SMEs in Pakistan have great potential to contribute considerably to economy. Nevertheless, to flourish and to survive with a competitive edge in turbulent business setting, it is necessary for SMEs to devise and execute their strategy by engaging in entrepreneurial actions. In strategic management and entrepreneurship literature entrepreneurial orientation (EO) is considered as a prominent concept. EO has been recognized in previous researches both conceptually and empirically, as an influencing factor regarding performance of organization. For that reason, we can predict that by implementing EO may boost up the performance of SMEs of southern Punjab as well. Previous studies were focused on numerous dimensions of EO predicting the firm performance and few on the relationship of EO with firm performance. There is a need to examine SECI model of knowledge creation with EO & firm performance because 1) it explores the interaction between tacit and explicit knowledge, 2) it focuses on both knowledge creation & sharing & 3) in previous studies SECI model is studied mostly in relationship with organizational learning and product development but fewer studies are available about its relationship with EO in the presence of Top Management Team.
Characteristics (Lee & Choi, 2003; Nonaka et al., 2000b & Li, Huang & Tsai, 2009; Rauch et al., 2009; Miller, 2011). Hence this study focuses on EO and its association with the performance of SMEs through knowledge creation and top management team characteristics from Pakistan.

**Literature Review**

**Entrepreneurial Orientation & Knowledge Creation**

It is established that Entrepreneurial orientation is affected by External Factors (i.e. Dynamism, Hostility & Heterogeneity) and Internal Factors i.e. Formalization & Centralization (Hassan & Iqbal, 2017) similarly previous scholars also stated that Entrepreneurial approaches have created new sights to facilitate the exploitation of new and existing knowledge to discover market opportunities for better firm performance (Wiklund & Shepherd, 2003). Through knowledge creation and entrepreneurial orientation employee can understand new product development to articulating knowledge into best firm performance (Nonaka & Konno, 1998; Nonaka & Takeuchi, 1995; Nonaka & Toyama, 2005).

Entrepreneurial attitudes and behaviors are critical for new ventures to facilitate the utilization of new and existing knowledge to discover market opportunities (Wiklund & Shepherd, 2003). Knowledge creation processes such as socialization, externalization, combination, and internalization describe a spiral of interactions between explicit and tacit knowledge (Nonaka, 1994; Nonaka & Konno, 1998). The SECI model of knowledge creation allows firms to exchange and transform knowledge continuously and dynamically through a series of self-transcendental processes (Nonaka & Konno, 1998; Nonaka et al., 2000). When developing entrepreneurial orientation, new ventures can exploit the dynamic SECI spiral to create and share knowledge dispersed among individual members. According to Resource-advantage view, tacitness and immobility made it difficult to diffuse & share knowledge (Hunt...
& Arnett, 2006; Clercq, Dimov & Thongpapanl, 2015). Therefore, a firm requires continuous transmission of EO into organizational objective of innovation and performance by concentrating knowledge creation. In this regard, theory of knowledge creation provided that, this tacit knowledge when interacted spirally and dynamically with explicit knowledge in terms of socialization, externalization, combination & integration-SECI- becomes the cause of knowledge creation in organizational setting (Nonaka, 1994; Nonaka & Konno, 1998).

Such tacit knowledge is articulated into explicit forms through externalization process. Dialogues, metaphors, or analogies are effective methods to express one's tacit knowledge shared with others. New ventures can further develop unique combinations to anticipate future changes or opportunities, and engage in opportunistic expansion seizing market opportunities in the process of new market entry (Griffith et al., 2006; Lumpkin & Dess, 2001). And then firms can actualize the knowledge of marketing concepts or procedures into practical operations through internalization process. Autonomous orientation reflects the ability to be self-directed in the pursuit of market opportunities (Lumpkin & Dess, 1996). Employees in new ventures need greater autonomy and self-regulation to determine what actions are required and how best to execute them. The combination activities edit and integrate knowledge by using documents or databases to generate new knowledge application. Through internalization activities, employees learn by doing autonomously to enrich their experiences and accumulate valuable know-how in an organization (Nonaka et al., 1996).

According to the above new ventures with the entrepreneurial orientation are more prone to focus attention and effort towards knowledge creation process. The SECI spiral can utilize the full potential of knowledge and further facilitate its creation and utilization within the company which facilitates the transformation and activation of entrepreneurial orientation. We can reasonably expect the positive relationship between entrepreneurial orientation and knowledge creation process. Hence, we hypothesize:
Hypothesis 1: Entrepreneurial Orientation has positive impact on Knowledge Creation

Entrepreneurial Orientation & Top Management Team Characteristics

Hambrick and Mason (1984) presented a broad spectrum of Upper Echelons with basic assumption of individual’s demographic characteristics are the indicators their attitude, training, experience and opinions. All this formulates a mental-driving force which have the relationship with an individual strategic decisions. These cognitive basis and values of Top Management Team (TMT) have strong relationship with tactical decision making and achieve team demographic characteristics demonstrating their social and cognition psychology (Michael & Hambrick, 1992; Jackson, 1992; Mael & Tetrick, 1992). It has been established in literature that community that have strong motivation for achievement or have strong need to flourish, accepts their responsibilities, seeks performance feedback, set goals to achieve and is willing to take calculated risks (Poon and Ainuddin, 2006). For that reason, individuals with great desire of success are likely to utilize entrepreneurial opportunities and achieve better than those with a fragile desire of achievement (Shane & Venkataraman, 2000). Similarly, people with external locus of control suppose that events of their lives are controlled by luck, fate or influence of powerful authority. Studies revealed that persons with internal locus of control often have a more articulated need for achievement and entrepreneurial inclination (Gurin et al 1969; Brockhaus 1982; Lao 1970). Entrepreneurs tend to view situations more positively than non-entrepreneurs, and his outcomes illustrated that entrepreneurs do indeed are more confident than non-entrepreneurs. Another study conducted by Xiao, Al-habeb, Hon and Haynes (2001) using data from the Survey of Consumer Finances with sample size of three thousand to study risk taking level of non-owner of business and family business owners concluded that family business owners were more prone towards risk taking than non-business owners. Entrepreneurship literature recommends the significance of risk-taking behavior in growth. Based on this literature debate it is clear that all three characteristics of Top
Management team have strong relationship with Entrepreneurial orientation hence it is hypothesized that

**Hypothesis 2.** Entrepreneurial orientation has positive impact on Top management team characteristics.

**Knowledge Creation and Firm performance**

Resource-advantage theory recognizes knowledge as strategic resource of the firms (Grant, 1996; Hunt, 1995; Hunt & Morgan, 1996; Teece, 1998). Whereas the Resource-based-view RBV has made important contributions in the rapidly growing area of strategic management (Wright, Dunford & Snell, 2001). Alvarez and Busenitz (2001) argue that the RBV can theoretically inform and extend current research on entrepreneurship. They suggest that it is through the entrepreneurial process of cognition, discovery, understanding market opportunities, and coordinated knowledge that inputs become heterogeneous outputs.

Resource-Based View (RBV) is explained by Barney (1991) as a view to identify internal strengths and weaknesses of the firm, which relies on two primary suppositions. Firstly, according to Penrose (1959), the RBV assumes that firms can be considered as a combination of dynamic resources and those different firms come up with various combinations of these dynamic resources. So, the first assumption is heterogeneity of firm resource. The capability to create and utilize knowledge enables a firm to develop sustainable competitive advantage because knowledge possesses the characteristics of heterogeneity, uniqueness, and immobility (Barney, 1991; Grant, 1996; Hunt & Arnett, 2006; Zack, 1999). Previous studies have revealed the significant role of knowledge creation in the successful organizations (Chia, 2003; Kogut & Zander, 2003; Matusik & Hill, 1998; Nonaka & Takeuchi, 1995). Organizations that better utilize knowledge creation process can connect knowledge in new and distinctive ways, and develop market offerings to provide value to customers (Hunt & Morgan, 1996; Lee & Choi, 2003; Nonaka & Konno, 1998).
From the perspective of knowledge creation theory, knowledge is created through dynamic interaction between tacit and explicit knowledge in SECI process (Nonaka, 1994). Socialization process seeks to collectivize knowledge embedded in individual members. Frequently social interaction and perception help organizational members to share mental modes and experiences (Nonaka et al., 2000b). Employees empathize with colleagues to exchange a variety of knowledge for their work and problem-solving (Becerra-Fernandez & Sabherwal, 2001), and thus diminish communication barriers between individuals (Nonaka et al., 2000a). In socialization, companies can converge and amplify tacit knowledge to increase collective learning, and improve the stock of knowledge (Nonaka & Takeuchi, 1995; Nonaka et al., 2000a). When tacit knowledge is converted to explicit knowledge, it is easier understood by employees. Externalization facilitates employees to express images or ideas as substantial concepts and notions that are needed for new product innovation and development.

The newly explicit knowledge is then integrated and disseminated at the group as well as the organizational level (Nonaka & Takeuchi, 1995; Nonaka et al., 2000b). Firms can use combination process to create new knowledge from existing knowledge and generate new knowledge application (Nonaka et al., 2000a). New knowledge and skill will enhance the firm's ability to innovate new products and services, or improve existing ones more efficiently, thereby reducing redundancies and costs (Grant, 1996; Gold et al., 2001; Lee & Choi, 2003). Through internalization, knowledge is transformed into organizational memory and is actualized in practical operations such as new product development or manufacturing procedure (Nonaka et al., 2000b). The firm utilizes its human capital to transfer tacit knowledge, which becomes the base for further innovation and new routine (Kogut & Zander, 2003; Lee & Choi, 2003; Nonaka et al., 2000a). Thus, the SECI model of knowledge creation transforms knowledge into business value and results in product innovation or process improvement (Lee & Choi, 2003; Nonaka et al., 2000b).
According to the above, when firms are better at knowledge creation through SECI process, they are more inclined to achieve efficiency, growth, and profit. It is believed that knowledge creation process is critical because of its positive relationship with performance. Thus, we propose the following hypothesis.

Hypothesis 3. Knowledge creation process will be positively related to firm performance

Top Management Team Characteristics & Firm Performance

The upper echelons theory is based on the idea of bounded rationality and attempts to explain the relationship between Top management team characteristics and performance (Hambrick & Mason, 1984). Upper echelons theory assumes that complex unpredictable situations are not objectively determined but rather are merely interpretable (Hambrick, 2007). The key postulation of the theory is that organizational outcomes that include strategies and performance are partially predicted by the characteristics of the dominant coalition of powerful actors in the organization. Tacheva (2007) postulates that executive’s limitations influence their evaluations of decisions on organizational problems and outcomes. The personalized actions are a function of the executive’s experiences, functional background, age, gender, education and ethnic background (Tacheva, 2007). The proponents of the upper echelon theory focused on the characteristics of the top management team (TMT) which they believed yield stronger organizational outcomes than the individual chief executive. Therefore it is safe to assert that the Upper echelon theory backs this particular study by affirming the link between the psychological traits or characteristics of the top management team and firm performance. As stated above the powerful actors i.e. the top management team in an organization thoroughly influences the decision making capabilities, planning and the probable solutions to different problems, we may use this theory to fortify this study as well as widen our understanding of the phenomenon and at the same time backing it up with an unambiguous theoretical lens.
In a longitudinal study of the need for achievement, McClelland (1965) suggested that a high need for achievement predicts entrepreneurial behavior and it is based on influences of training and incidents of the individuals. Furthermore, people with external locus of control suppose that events of their lives are controlled by luck, fate or influence of powerful authority. Studies revealed that persons with internal locus of control often have a more articulated need for achievement and entrepreneurial inclination (Gurin et al 1969; Brockhaus 1982; Lao 1970). An ambiguous situation is perceived as the one in which inadequate, complex or apparently conflicting information is provided to the individual or that information is not adequate (Norton, 1975). The person with low tolerance of ambiguity avoids ambiguous stimulus, experiences stress and reacts prematurely while, person having high tolerance of ambiguity perceives ambiguous situations as demanding, attractive, and motivating and never denies accepting it (Koh, 1996).

On the other hand, the usual understanding of a risk taker is someone who in the perspective of a business venture pursues a business idea when the likelihood of success is small (A Smith-Hunter, Yonker and Kapp, 2003). The probability of receiving rewards requires individuals to engage themselves in a situation that is not clear, and taking actions in that situation (Brockhaus, 1980). In a study to establish the validity of common stereotypes of who avoids risks and who takes risks carried by MacCrimmon & Wehrung (1990) drawing on a sample of five hundred chief executives of businesses it was revealed that the most successful executives were the biggest risk takers and the most risk averse were the most experienced executives.

Thus based on above narrated facts about Top Management Team Characteristics (i.e. Need for achievement, locus of control, tolerance of ambiguity & risk taking propensity) and firm performance, fourth hypothesis of the study is postulated as;

Hypothesis 4: Top Management Team Characteristics have positive relationship with firm performance.
Mediation

There exist a Positive relationship between EO and Knowledge creation (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005) and positive impact of Knowledge Creation on Firm Performance (Nonaka, 1994; 1998; Nonaka et al, 2000a; Wiklund & Shepherded 2003; Zhang, Lim & Cao, 2004; Nonaka & Toyama, 2005; Griffith et al., 2006 & Hunt & Arnett, 2006). Studies shows that entrepreneurial orientation along with knowledge creation procedure, and knowledge creation process with firm performance produce best outcomes. It means that relationship between entrepreneurial orientation and firm performance is indirect. Therefore, knowledge creation process plays the vital role to mediate the relationships between independent variables of entrepreneurial orientation and dependent variable of firm performance. Indirectly, performance effect of entrepreneurial orientation is mediated by knowledge creation process and hypothesized accordingly

H5: Knowledge Creation mediates the relationship between Entrepreneurial Orientation & Firm Performance.

Mediating effect of Knowledge Creation

Numerous studies supports a Positive relationship between EO and Top Management Team Characteristics (TMTC) (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005) and positive impact of TMTC on Firm Performance (A Smith-Hunter, Yonker and Kapp, 2003; Tacheva, 2007; Hambrick, 2007). It means that entrepreneurial orientation along with TMTC, and TMTC with firm performance produce better outcomes. Which affirm that relationship between entrepreneurial orientation and firm performance is indirect. Hence, TMTC plays the vital role to strengthen the relationships between independent variables of entrepreneurial orientation and dependent variable of firm performance. Indirectly, performance role of entrepreneurial orientation is mediated by TMTC and hypothesized accordingly
H6: Top management team characteristics mediates the relationship between Entrepreneurial Orientation & Firm Performance.

Fig 1: Theoretical Framework

Methodology

Sample

Survey method was employed to acquire the information from the sample population. The survey method is a suitable method to collect the huge figures of responses required for hypothesis testing, it is quite simple to administer, and relatively easy for respondents to complete (Saunders et al. 2009). The questions were devised to examine the relationships between the study variables and also explain the descriptive statistics. The study used close ended questionnaire for collecting data regarding variables used in the study. Data was collected from sample of 249 owners of SMEs from Pakistan using purposive sampling technique.

Variables and Measures

Following scale items are adopted for measuring the constructs used in the study (see Table-01):
Table-01: Variable Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial orientation</td>
<td>Miller, 1983; Lumpkin &amp; Dess, 1996, 2001</td>
</tr>
<tr>
<td>Firm performance</td>
<td>Murphy et al., 1996</td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>Becerra Fernandez and Sabherwal (2003)</td>
</tr>
<tr>
<td>Top Management Team Characteristics</td>
<td></td>
</tr>
<tr>
<td>Need for achievement</td>
<td>Edwards (1959)</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>Rotter (1966)</td>
</tr>
</tbody>
</table>

Data Analysis and Results

This section describes the application of the PLS-SEM approach and the results to assess the proposed hypothesis. PLS-SEM is a component based partial least squares approach to structural equation modeling for scrutinizing relationships among multiple variables (Hair et al. 2014). Structural equation modeling (SEM) is considered as quasi-standard in management studies to examine cause-effect relation between latent variables (Bollen, 2011). PLS-SEM provides a valuable and elastic instrument for statistical model construction and scrutiny. Every PLS path model consists of two sub models which are named as measurement or outer model and second one is structural or inner model. Interaction of a latent variable with its manifest variables is analyzed through measurement model while the structural model estimates association among latent variables. The detailed assessment of measurement model and structural model is given below:
Evaluation of Measurement Model

Measurement model is evaluated to verify the fit among theory and data (Hair et al. 2014). This evaluation measures the relationship among manifest variable (observed) and (non-observed) latent variables (See table-02).

**Table-02: Overview of the results**

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>Cronbachs’ Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial</td>
<td>0.642</td>
<td>0.951</td>
<td>0.943</td>
</tr>
<tr>
<td>Orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Performance</td>
<td>0.793</td>
<td>0.893</td>
<td>0.849</td>
</tr>
<tr>
<td>Knowledge Creation</td>
<td>0.623</td>
<td>0.963</td>
<td>0.959</td>
</tr>
<tr>
<td>TMTC</td>
<td>0.587</td>
<td>0.926</td>
<td>0.909</td>
</tr>
</tbody>
</table>

The researcher examined the reliability of individual scale items through factor loadings of the items on their related construct. This outer loading was generated by Smart-PLS 3.0 software (Ringle et al. 2005). Each factor loading was reviewed against the criteria (≥ 0.6) to retain significant scale items (Hair et al. 2011; Hair et al. 2014). Factor loading score of each indicator against its relevant construct is presented in Fig-01, given below.

Through Fornell-Larcker test discriminant validity on the construct level is examined (Fornell & Larcker 1981). The test posits that in the given model a construct should share larger variance with its own items than it shares with other construct’s items. Thus, the correlation of a variable with its own items should be higher than the correlation between the construct and

SMEDA Research Journal
any other construct used in the research study (Fornell & Larcker 1981; Chin 2010). Further, the correlations between the coefficients should not exceed than 0.8 (Bagozzi & Philips, 1991). In every case, the square root of AVE values was found greater than the corresponding off-diagonal correlations (Barclay et al. 1995). The study results for Fornell-Larcker criterion are given in table-03.

Table -03 Fornell-Larcker criterion

<table>
<thead>
<tr>
<th></th>
<th>Entrepreneurial Orientation</th>
<th>Firm Performance</th>
<th>Knowledge Creation</th>
<th>TMTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Orientation</td>
<td>0.801</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Performance</td>
<td>0.736</td>
<td>0.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Creation</td>
<td>0.691</td>
<td>0.884</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>TMTC</td>
<td>0.614</td>
<td>0.797</td>
<td>0.751</td>
<td>0.766</td>
</tr>
</tbody>
</table>

Following the assessment criteria, reliable and valid results from the measurement model were retained for the assessment of the structural model.

**Evaluation of the structural model**

The structural model estimates the relationship among constructs specified by theory. Hair et al. (2014, p. 169) argued that “PLS-SEM evaluates the structural model on the basis of heuristic criterion which are determined by the model’s predictive capabilities”. Estimates determine how well the endogenous constructs are predicted (Hair et al. 2013; Hair et al. 2014). The quality of the structural model is evaluated by examining the following criteria (Hair et al. 2014; Hair et al. 2013):
1. Coefficient of determination ($R^2$)

2. Path Coefficients ($\beta$) for strength and direction of relationships between latent variables

**Coefficient of determination ($R^2$)**

$R^2$ is an evaluation of predictive accuracy and degree of $R^2$ explains cumulative effect of exogenous latent variables on endogenous variable (Hair et al. 2014). In PLS-SEM, $R^2$ value is the most frequently used criterion to clarify the predictive accuracy of the framework developed (Hair et al. 2014). The value of $R^2$ ranges from 0 to 1 signifies larger predictive precision (Hair et al. 2014). As such, $R^2$ values of 0.25, 0.50, and 0.75 are interpreted as weak, moderate and strong respectively (Hair et al. 2011; Hair et al. 2014). Study results for coefficient of determination are given below in Table-04

<table>
<thead>
<tr>
<th>Constructs</th>
<th>R square</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Performance</td>
<td>0.822</td>
<td>Strong</td>
</tr>
<tr>
<td>Knowledge Creation</td>
<td>0.477</td>
<td>Moderate</td>
</tr>
<tr>
<td>Top Management Team Characteristics</td>
<td>0.377</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**Path Coefficients ($\beta$)**

Path coefficient shows the relationship between variables either negative or positive. Furthermore, it indicates the degree of relationship and statistical impact between variables. The empirical t-value ($t=\beta/\hat{\beta}$) needs to be significant at a certain level of confidence (p value) to confirm (or otherwise) the hypothesized relationships (Hair et al. 2014). Parameters with a
t-value more than 1.96 indicate 95% confidence level (p<0.05) and those with a t-value greater than 2.58 indicate 99% confidence level (p<0.01) (Hair et al. 2014).

In the study, all empirical t-values were found greater than 1.96 thereby showing the significance of path coefficients at (p<0.05), 95% confidence level (see Table-05). As such, the results indicated the confirmation of all hypothesized relationships for the study.

### Table-05: Path Coefficients (β)

<table>
<thead>
<tr>
<th>Structural Relationship</th>
<th>Path Coefficient (β)</th>
<th>Standard Error</th>
<th>T-Statistics</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Orientation → Knowledge</td>
<td>0.691</td>
<td>0.051</td>
<td>13.487</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Orientation → Top Management</td>
<td>0.614</td>
<td>0.056</td>
<td>11.171</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Team Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Creation → Firm Performance</td>
<td>0.665</td>
<td>0.048</td>
<td>13.322</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Top Management Team Characteristics → Firm</td>
<td>0.305</td>
<td>0.055</td>
<td>5.9549</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mediation Effect (Indirect Effect)**

To estimate the magnitude and importance of the indirect effects (mediation) this study employs the variance accounted for (VAF) value, which represents the ratio of an indirect effect to the total effect:

\[
VAF = \frac{\text{Indirect Effect}}{\text{Total Effect}}
\]

(Iacobucci et al., 2007; Haier et al., 2017). VAF value below than 20% shows
no mediation whereas, VAF value form 20% to 80% shows partial mediation and VAF >80% shows full mediation (Haier et al., 2017). As shown in Table-08, all the mediating effects here tested are statistically significant at the 95 % confidence level and perform a substantial partial mediating influence on the relationship between Interaction affect. As shown in table-06, VAF score is 61% and 39% for Knowledge Creation and Top Team Management Team Characteristics, it means both variables partially mediates the relationship between EO and Firm Performance.

**Table-06: Mediation (Indirect) Effect**

<table>
<thead>
<tr>
<th>Exogenous</th>
<th>Mediator</th>
<th>Endogenous</th>
<th>Total Effect</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>VAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Orientation</td>
<td>Knowledge Creation</td>
<td>Firm Performance</td>
<td>0.740</td>
<td>0.287</td>
<td>0.453</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Top Management Team Characteristics</td>
<td></td>
<td>0.474</td>
<td>0.287</td>
<td>0.187</td>
<td>39%</td>
</tr>
</tbody>
</table>

*Fig-02: Structural relationship*
Discussion & Conclusion

Discussion on EO & Knowledge Creation

A conceptual model is built up in this study to evaluate the association among EO and performance through mediating variable of knowledge creation process. Results of the study depicts that as we introduce process of knowledge creation as a mediating variable, the association of EO and performance will be strengthened. It particularly means that through knowledge creation process, entrepreneurial orientation is surely linked with firm performance. Therefore, we can conclude that knowledge creation process mediates the relation of EO and performance.

The association among entrepreneurial orientation and performance is still erratic, although the significance of for increased performance EO of firm has been accepted by both academic writers and managers (Dess & Lumpkin, 1996). This research suggests that EO has factual impact on firm performance and it is imperative for business ventures (Wiklund & Shepherd, 2003; Lumpkin & Dess, 2001; Barringer & Bluedorn, 1999; Zahra & Covin, 1995). By introducing knowledge creation process as a mediating variable between these two is a humble contribution in entrepreneurship literature to augment our consideration regarding influence of entrepreneurial orientation on performance of firm. Results of our research shore up current opinions for a contingency view of the firm performance and entrepreneurial orientation linkage (Lumpkin & Dess, 2001).

The conceptual model developed in this study presents empirical support to the theory of knowledge creation by Nonaka's (1994). The result discloses that in order to get high performance firms implement entrepreneurial orientation and the knowledge creation works as a mediator between these two. (Nonaka et al., 2000; Nonaka & Konno, 1998; Nonaka, 1994) place stress on the dynamic processes of knowledge creation rather than its outcomes.
Knowledge creation process links implicit and explicit knowledge and further transforms it into reciprocal coiled procedure of socialization, internalization, externalization and combination. Due to the vibrant SECI model firms become capable of producing new and innovative knowledge or put together present knowledge to outline new approaches, consequently taking it to another increased level and create knowledge assets for organizations. Firms can enhance the enlistment of knowledge and generate novel spirals of knowledge by incessantly transforming entrepreneurial orientation into actions.

Additionally, knowledge creation process also creates a relevant support from resource based view of firm. The resource-based theory of firm is of view that due to its uniqueness and complexity to imitate by rivals knowledge embedded within the organization is a valuable resource (Hunt & Morgan, 1996; Grant, 1996; Barney, 1991; Zack, 1999). These results suggest that spiral of SECI enhances capabilities of firms to alter knowledge into the firms memory everlastingly and by this way directs the firm towards growth, profit, and efficiency. To maintain competitive advantages outcomes of the research creates link with other researches to underline the considerable significance of knowledge creation for ventures (Lee & Choi, 2003; Grant, 1996; Nonaka & Takeuchi, 1995; Matusik & Hill, 1998; Chia, 2003).

Lastly, the study adds value by amalgamating of the areas of entrepreneurship and knowledge management (Lumpkin & Dess, 1996; Venkataraman & Shane 2000). (Shepherd & Wiklund, 2003; Lumpkin & Dess, 2001; Zahra & Covin, 1995; Barringer & Bluedorn, 1999) argued that as entrepreneurial orientation presents a significant way to find out and utilize new and cost-effective business prospects, entrepreneurial orientations are regarded as critical for their success. Significance of leveraging knowledge and generating innovative combinations of knowledge for increased level of learning is highlighted by knowledge management literature (Zack, 1999; Nonaka et al., 2000; Grant, 1996). Conversion procedure is considered
as a dynamic system during that entrepreneurial orientation is generated in a firm and employed to attain favorable outcomes.

From a practical view, this research recommends to managers that they should know the value of knowledge creation process in firm performance and entrepreneurial orientation relationship. Executives should be the facilitator of the knowledge creation procedure by taking primary actions in organizing it. Organizations can magnify and expand knowledge all the way through vibrant exchange between implicit and explicit knowledge. To generate new knowledge managers are required to foster a challenging environment that facilitate employees to share and swap implicit knowledge. Different approach is used in every stage of knowledge conversion to generate and share it efficiently (Nonaka et al., 2000; Nonaka & Konno, 1998).

As, mutual understanding and trust is build up in apprenticeship in the socialization. While during externalization, concept creation is made by using metaphors. Information technology such as groupware, database, and on-line networking provided by firms can be utilized in combination process. In the internalization process knowledge is articulated and personified through experiments. Therefore, managers are supposed to select and design suitable methods for SECI model adoption carefully, in accordance with business environment, type of industry, age of firm and rivals strategy to facilitate knowledge creation in organization to acquire certain performance.

Moreover, to enhance performance firms need to involve employees in SECI related activities. Directors must grant perks and benefits in order to highlight the most wanted activities of knowledge creation. Employees will be motivated to replace, find out, and create knowledge and transform knowledge to fulfill strategic goals by adopting these measures.
Discussion on Top Management Team Characteristics

To study the role of top management team characteristics, a theoretical model has been developed in the second part of this study relating entrepreneurial orientation and performance of the firm. Results of the research illustrates that EO can positively boost performance of the firm. Lumpkin & Dess, 1996 argues that as the significance of EO for increased firm performance has been accepted, the level of strength of the bond among entrepreneurial orientation and performance is still unpredictable. This particular study suggests a strong bonding between entrepreneurial orientation and firm performance through mediation that provides further foundations for proclamations regarding the affirmative outcome of entrepreneurial orientation on performance of firm (Wiklund & Shepherd, 2003; Lumpkin & Dess, 2001; Zahra & Covin, 1995; Barringer & Bluedorn, 1999).

The influence of top management team characteristics on organizational outcomes has attracted monumental research interest over the recent years. Several studies have attempted to test the influence of TMT characteristics on organizational performance. According to Hambrick and Mason (1984) organizational strategic inclination is a reflection of the characteristics of its top management team members.

However, existing evidence demonstrate that previous studies have largely concentrated on investigating top management demographic diversity and performance relationship (Miller, Burke & Glick, 1998; Marimuthu & Kolandaismamy, 2009; Muchemi, 2013). Researchers pursuing this track of investigation argue that demographic characteristics are used as proxy for cognitive variety within TMT characteristics (Leonard, Beauvais & Scholl, 2005). Although some researchers have attempted to assess psychological characteristics independent of demographics (Tegarden, Tegarden & Sheetz, 2007; Kinuu, 2014), this line of thought is still at infancy stages of empirical investigation.
The results are indications for the moderate positive influence of top management team characteristics i.e. risk taking propensity, need for achievement, locus of control and tolerance for ambiguity had positive and significant influence on EO and performance relationship. The results are consistent with the upper echelons theory which holds that top management characteristics influence performance through decision making as, they are running the enterprise and their vision toward business is of utmost importance (Hambrick & Mason, 1984). Moreover, results of our study support earlier findings (Haleblian & Finkelstein, 1993 and Awino, 2013) that have linked top characteristics with performance.

**Contributions of the Study**

This study contributes to the academic entrepreneurship literature. This particular study enhances the understanding of the EO concept and its relationship with performance within the context of SMEs in Pakistan. The study results reveal strengthening of EO performance relation in the presence of knowledge creation and top management characteristics. In such turbulent environment where SMEs are sharing pressure with other sectors regarding economic development, timing of this dissertation makes it one of the primary studies examining the implications of EO on SMEs and it derives some of its contribution from the first mover’s advantage.

This study is considered as an attempt to comprehend the implementation of the EO performance relation, facilitated with knowledge creation and Top management team characteristics. Therefore it provides new insights for SMEs’ managers to strengthen entrepreneurial spirit and develop entrepreneurial behavior in creating their firms’ strategy to achieve a competitive advantage even though they face resource limitation and can accomplish this goal by adopting knowledge creation and particular top management characteristics to enhance the relationship of EO and firm performance. The study suggests that all EO
dimensions implemented within SMEs are associated with performance enhancement through the mediation of knowledge creation and particular top management characteristics. Therefore, SME owners/managers need to evaluate the EO performance relationship according to their business to add value. The study is conducted with actual entrepreneurs in the SMEs sector which is the most important contribution and provides a valuable underpinning for policymakers to expand their strategy to sustain and enhance performance of SMEs sector by implementing entrepreneurial activities, knowledge creation process and developing particular top management characteristics.

In the end it is summarized that, entrepreneurial orientation adoption in firms is vital to boost performance of the firm. Importance of knowledge creation process and top management attributes as mediating variables in examining the association among entrepreneurial orientation and performance of firm is highlighted by our study. These viewpoints developed in this dissertation have significant inferences for firms in today's changing and aggressive environment.

**Research Limitation & Future Guidance**

Researchers not only made a major contribution towards knowledge accumulation but also highlight some areas which needs intentions of future scholars to contribute their role in knowledge accumulation process. Researchers tried best to develop a more comprehensive model however it can be re-conceptualized by introducing other paradigms from the field of Entrepreneurial Orientation. Knowledge Creation & Top management team characteristics can be studied collectively with competitive advantage. In this study only financial performance was focused, future studies can be conducted by focusing on non-financial performance & innovative performance. Future study must focus on the firm performance in context of stakeholders’ concern, resources availability and interrelation among various firm performance measurement.
References


Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.


Miller, Burke & Glick, 1998


Terungwa, A. (2012). Risk management and insurance of small and medium scale enterprises (SMEs) in Nigeria. *International Journal of finance and Accounting, 1*(1), 8-17.


International Technology Transfer and Technological Capability

Upgradation of Pakistan’s Small and Medium Enterprise (SME) Cluster(s)

Author:
Ahson Munir

Contact Details:
ahsanwala@yahoo.com
Abstract

Newly industrialized Economies (NIEs) such as South Korea, Singapore and recently China achieved industrial progress through a three stage Technological Capability Upgradation (TCU) process, which involved acquiring technologies from abroad, assimilating them and later improving these technologies for better value-added processes and products. NIEs supported acquisition of technologies from abroad through highly trained manpower, collaboration with customers and key suppliers, and focused industrial policy. In Pakistan, most of initiatives directed towards manufacturing small and medium enterprises (SMEs) focus on improving operational efficiency. Therefore, this paper explores international technology transfer initiatives among SMEs in three industrial clusters of Sialkot to identify factors affecting international technology transfer. The results could be used by local SME development agencies to tailor their policies to facilitate ITT and hence TCU in researched clusters for sustained competitiveness.

Keywords: Technological upgrading, Developing countries, Pakistan, Sialkot, Clusters
Introduction

Technological capability upgradation (TCU) plays a strategic role in the competitive advantage of firms, industries, and even countries (Jin and von Zedtwitz, 2008, Malik and Wickramasinghe, 2013). For this reason, it has become a focus of attention not only among academics, but also among business managers and government officials, particularly in developing economies. Small and medium enterprises (SMEs), especially export-oriented, are generally the backbone of economies of developing countries. SMEs usually exist in clusters but are generally resource constrained and therefore require support from external factors such as development agencies, customer, suppliers and local academia to help in international technology transfer (Khan et al., 2015, Khan and Abasyn, 2017). International technology transfer (ITT) is a major source of TCU in firms, especially in SMEs, in developing countries(Xu et al., 2018).

The United Nations Industrial Development Organisation (UNIDO), a subsidiary of the United Nations, is working closely with developing countries to enhance the productivity of their industrial clusters. The UNIDO has defined industrial cluster, as quoted in the paper “The cluster approach and SME competitiveness: a review” by Karaev et al. (2007, p. 820), as: sectorial and geographical concentrations of enterprises that produce and sell a range of related or complementary products, and which also face common challenges and opportunities.

The international literature associated with manufacturing SMEs has moved from improving operational efficiency to TCU for improved or new processes and products for sustained competitiveness (Carvalho and Costa, 2014). However, Pakistan’s policy and academic literature generally focuses on increasing the productivity, quality of manufacturing SMEs for competitiveness, without analysing technological capability level of SMEs and factors affecting technological competitiveness. Such a research would help local academia
and policy makers analyse the existing local SMEs technological capability level and thus devise interventions for technological capability upgrade of SMEs and their clusters accordingly. Therefore, a research was conducted to analyse the existing technological capability level among competitive manufacturing SMEs in the export-oriented clusters of Sialkot. The research results show that most of TC upgradation initiatives taken by interviewed firms did not involve neither government agencies nor academia, and the focus of initiatives was on increasing product portfolio and acquiring international accreditations for new market access.

Section 0 discusses TCU, three stage TCU process for developing countries and factors facilitating TCU. Section 0 discusses factors which could help facilitate TCU for sustained competitiveness in Pakistan. Section 0 describes methodology, while section 0 is results. Section 0 draws conclusions.

Literature review

Technological Capability

Lall (1990, p. 17) defined technological capability upgradation (TCU) as the capability to execute all technical functions entailed in operating, improving, and modernizing firm’s productive facilities. Kim (1997, p. 4) defined TCU, in a developing country context, as absorbing existing knowledge, assimilating it, and in turn generating new knowledge. These definitions of TCU have been supported in recent literature (Pietrobelli and Puppato, 2016, Dutrénit et al., 2018)

Technological Capability Upgradation Process

A wide range of research on TCU process in NIEs (Kim, 2001, Jin and von Zedtwitz, 2008, Yülek, 2018) argue that the technological capability upgradation (TCU) process follows three stages (Table 1):
i. Acquisition: At the acquisition stage domestic firms transfer mature technology from developed countries. At this stage, the process engineering is involved with debugging the production line, improving productivity and quality through liaison with its customers and suppliers. While product engineering involve assimilation and improvement of product design.

ii. Assimilation: The assimilation stage requires adapting the acquired technologies for better value-added processes and products for higher-end markets. This stage is assisted by linkages to technology transfer, cooperation with local and foreign linkages.

iii. Innovation: The innovation stage requires in-house R&D for new TCs resulting in new products and processes. The main R&D activities of firms in developing countries are acquisition and assimilation of mature technologies, not development of new technologies.

Table 1: TCU process
Major Source of Technological Capability Upgradation in a Developing Country

The process of managing the acquisition and incorporation of technology from a source, external to the firm, is referred as technology transfer. International technology transfer (ITT) covers international transfer of all forms of physical assets, knowledge and human capabilities for the manufacture of a product, for the application of a process, or for the rendering of a service (Wickramasinghe and Garusinghe, 2010, Malik and Wickramasinghe, 2013).

Extant literature differentiates between product, process, and management system technologies. Product technology is the technology associated with the design of a product, usage and maintenance of the product, and the development of managerial and organisational capabilities needed to leverage the technology optimally. Process technology is the set of ideas involved in the manufacture of a product, or sequential steps and the decisions necessary to combine/ process materials to produce the finished product, technology associated with the maintenance of process, and the development of managerial and organisational capabilities needed to leverage the technology optimally. Management systems include new methods of organisation and management introduced to enterprise such as total quality management, total productive management and Toyota production system (Wickramasinghe and Garusinghe, 2010, Brophy et al., 2013).

Firms in a developing country find that internal development of technology needed for new products, new processes and operational improvement is somewhat difficult. They must increasingly acquire technology from external / foreign sources. Hence, technological upgradation progress in developing countries relies heavily on absorption and adaptation of imported technology. Foreign direct investment, cooperation with customers, suppliers, and licensing agreements are some of major channels for TCU.
Factors affecting Technology Transfer:

The success of technology transfer, implementation and utilisation of technological capabilities in SME clusters depend upon various factors such as qualified human resource within the firms, governmental policy and focus of development agencies.

According to Kim (2001), education, governmental policies and mobility of experienced technical people were instrumental in making ITT initiatives and thus TCU possible in South Korea. Malik and Wei (2011) appropriate the success of ITTs in Chinese telecommunication firms to project work-level human resource capabilities in dealing with new technologies acquired through ITT. According to them, Chinese firms have overcome the constraint of good supply of technician level staff; but to move from manufacturing to innovation economy, a big concern for Chinese firms is that they lack technical managers, which is hindering firm growth. Further, according to authors many Chinese firms have emphasised the importance of government in helping technological upgradation within the SME sectors and the economy as a whole. Therefore, they conclude that human resource training through use of new technology that has been acquired through a technology transfer project (TTP) and focused government policies are among the main facilitators of TT.

In a developing country’s context, Wickramasinghe and Garusinghe (2010) found the of role of human resource as pivotal in ITT initiatives to Sri Lankan private sector manufacturing firms. In another research paper, Malik and Wickramasinghe (2013) found the challenges related to training provision, human resources and complexity of transfer process were the main factors affecting acquisition of ITT initiatives by manufacturing firms for TCU. Thus, for TCU of SMEs, ITT plays an important role, and factors such as government policy, firm’s technical people are important enablers in success of ITT initiatives.
Various factors affecting TCU of Pakistan’s SME Clusters

Scope of governmental policy

Since the time of independence, the Government of Pakistan (GoP) favoured a state-centric and large-scale manufacturing driven industrialization model, which affected state’s infrastructural and industrial development policy for SMEs (Anwar, 2010, Dasanayaka and Sardana, 2010a, Hussain et al., 2015). Only recently, the Government of Pakistan (GoP) realised the importance of SMEs to the country’s economy and an SME policy was announced in 2007 (Pakistan).

The GoP announced its national science, technology and innovation policy in 2012-2013 (Pakistan, 2012). Admitting a lack of R&D in local industry, the policy document concedes that this is in contrast to the industrialized countries where the industrial sector is a major contributor to the overall R&D effort of the country. The policy recommends international technology transfer for local technological upgradation. The policy document envisages ambitious goals and objectives. However, how these goals and objectives would be achieved and a time frame for achieving the goals is not mentioned in the policy document.

Scope of government organisations in Pakistan responsible for industrial clusters’ competitiveness

GoP has set up various development agencies, noticeable among them are small and medium enterprise development agency (SMEDA), technology upgradation and skill development company (TUSDEC) and trade development authority of Pakistan (TDAP) to protect and promote the interests of SMEs. The focus of these development agencies has been to improve the operational efficiency of SMEs to make them more cost-competitive (Munir, 2016b).

SMEDA is providing technical guidance and consultancy, with the help of international development agencies, to different export-oriented industrial sectors in the areas of...
productivity improvement, quality assurance, cost reduction and energy efficiency. However, with other competing developing countries, such as Vietnam, Thailand, Bangladesh, also improving their industrial sectors’ quality, productivity, cost competitiveness, it is not clear how these factors would be a sustained source of competitiveness for Pakistan’s industry at the international level. SMEDA is also involved in setting up common facility centers (CFCs) across Pakistan. Since SMEs are resource constrained and cannot afford expensive technologies due to heavy cost, therefore, SMEDA, with the support of Ministry of Industries and Production, has established sixteen CFCs for the sixteen export-oriented clusters of SMEs across the country.

TUSDEC also aims to expedite value-addition and productivity among manufacturing sectors by technology assimilation. However, it is not explained how this technology assimilation will occur, neither TUSDEC website cites an example of a sector/sub-sector where it has helped in value-addition through technology assimilation. Further, TUSDEC has taken initiatives to improve the performance of clusters, a sphere on which SMEDA is also working.

Similarly, TDAP’s mandate, among others, is to examine supply chains of strategic export sectors and develop plans and initiatives for strengthening supply base including exporters’ capabilities and capacities. Technical Education and Vocational Training Authority (TEVTA) has been established with the aim to enhance global competitiveness in province Punjab, through a quality and productive workforce by developing demand driven, standardized, dynamic and integrated technical education and vocational training service.

Thus, the emphasis of these organisations is on increasing the cost competitiveness and efficiency of supply chain, which is, however, not a source of sustained competitive advantage at international level (Carvalho and Costa, 2014, Pietrobelli and Puppato, 2016).
Scope of academia

Most of academic literature emphasis on manufacturing SMEs in Pakistan relates to business performance, access to different markets, quality accreditations, supply chain management (Bhatta et al., 2007, Kureshi et al., 2009, UNIDO, 2010, Ahmad, 2014a). However, recent international academic literature associated with SMEs and their clusters has moved from focusing on operational efficiency to technological upgrading for improved or new processes and products for sustained competitiveness (Pietrobelli and Rabellotti, 2011, Pietrobelli and Puppato, 2016). Thus, our local academic literature is not in sync with latest trends for competitiveness at international level.

In sum, GOP and its various government development agencies are working for operational improvement with no roadmap for technological upgradation of targeted sectors, clusters. Accordingly, following recent research trends of understanding factors which facilitate ITT, current study presents analysis of ITT initiatives of manufacturing smes in Sialkot, Pakistan to present recommendations for TCU of researched clusters. The research findings could be used as input for policy formulation of TCU of researched industrial clusters.

Methodology

General characteristics of Sialkot industrial clusters

In Pakistan, a developing country, small and medium enterprises (SMEs) form more than 99 percent of the total businesses (Pakistan, 2007, Speechley, 2011). They have a sizeable share in the country's industrial employment, and in manufacturing exports. In manufacturing and other sectors, 87 percent of SME employ fewer than five people while 98 percent currently employ fewer than 10 persons. The current SMEs sector accounts for 25 percent of manufacturing exports in Pakistan, while its share in value addition is 28 percent (Dasanayaka and Sardana, 2010b, Ahmad, 2014c, Zafar and Mustafa, 2017).
After Karachi, Sialkot is considered Pakistan’s second largest source of foreign exchange earnings, generated mainly through its SMEs dominated, export-oriented industries (Dasanayaka and Sardana, 2010a, Akhtar, 2010, Ahmad, 2014b). Sialkot has various industrial clusters, prominent among which are those of leather, surgical instruments, and sports goods (Bhutta et al., 2007, Ranjha, 2014). The general characteristics of the interviewed clusters, as derived from various government websites, are described in Table 2, according to which all the clusters are exporting low-value added items mainly to Europe and North America, and generally compete on quality and cost competitiveness.

Sialkot clusters are mostly labor intensive with a low level of automation, minimal skills training, which results in high defect rates and low efficiency levels (Khan, 2012). As a result, it is facing serious problems in increasing or even sustaining its share of the global market (Ahmad, 2013).

<table>
<thead>
<tr>
<th>General characteristics of the researched clusters</th>
<th>References</th>
</tr>
</thead>
</table>
| Leather goods cluster | (www.smeda.org.pk/  
http://punjab.gov.pk/sialkot_  
key_industry  
http://www.plgmca.pk/)  |
| General products | Markets targeted | Business strategy |
| Motor bike garments, gloves, shoes, fashion accessories | EU, and North America but efforts are afoot to target new markets like Russia, Africa, Latin America | Quality and cost competitive |

| Sports goods cluster | (http://punjab.gov.pk/sialkot_  
key_industry  
http://www.psgmea.com/)  |
| General products | Markets targeted | Business strategy |
| Soccer balls, volley balls, beach balls, cricket bats, hockey sticks, gloves, and sportswear like track suits, T shirts, wind breakers, Judo/ karate kits etc | EU and USA | Quality and cost competitive |

| Surgical instruments cluster | (www.simap.org.pk/  
www.smeda.org.pk/  
www.SCCI.com.pk/  
http://punjab.gov.pk/sialkot_  
key_industry/)  |
| General products | Markets targeted | Business strategy |
| Mostly disposable stainless steel instruments but also produces higher quality theatre instruments | Japan, EU , North America | Quality and cost competitive |

Table 2: General competitive characteristics of researched Sialkot clusters
**Sample**

Most of the SMEs fail in first five to eight years of their operation. Therefore, those SMEs were selected for interviews which were independent, operating under their own name and had been in operation for more than 20 years (Ahmad et al., 2013, Munir, 2016a). Primarily, SME executive of each firm was interviewed as SME executives generally control all the affairs of the firm such as firm’s business strategy, markets, customers targeted and future plans. (O'Regan et al., 2006, Ahmad et al., 2013, Aslam and Hasnu, 2016). At the end of interview a shop floor visit was requested from interviewees to validate, or otherwise, of interview findings. Further, firm brochures and their websites were used to triangulate data gathered from interviews.

Twelve firms, four in each cluster, were interviewed and their general characteristics are given in Table 3. Representative of local SMEDA chapter was requested to nominate twelve leading local firms, which have been in business for more than twenty years. Also, the list of twelve was shown to each firm executive to have their views on the suitability of firms as research sample, and majority concurred with the sample although at times they were competitors of each other, thus lending credence to the health of sample selected.
<table>
<thead>
<tr>
<th>Firm</th>
<th>Markets targeted</th>
<th>Products</th>
<th>Competitive/ Differentiating Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leather Goods Cluster Firms</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| A | Low-end market segment in USA, Europe | Leather and motor bike garments, fashion accessories, leather upholstery | • Quality, productivity  
• Bulk volume handling capacity, large product portfolio, brand name in USA |
| B | Low-end market segment in Canada, Japan, Europe | Leather and motor bike garments, | • Flexibility, quality, productivity  
• Considerable product range, brand name in Canada |
| C | Low-end market segment in Europe | Leather and motor bike garments | • Cater to low volume orders, limited product range, quality |
| D | Low-end market segment in Europe | Leather and motor bike garments | • Cater to low volume orders, limited product range, quality |
| **Sports Goods Cluster Firms** | | | |
| E | Low to medium end market segment in USA, Europe | Cricket, football goods, sports garments | • Quality, productivity  
• Broad product range |
| F | Low to medium end market segment in Scandinavian countries | Sports wear and sports goods | • Quality, productivity  
• Worker and environment friendly international accreditations |
| G | Low to medium end market segment in Europe | Sports wear and sports goods | • Quality, productivity  
• Increasing product range |
| H | Low to medium end market segment in USA, Europe | Sports goods wear, international manufacturing setups | Productivity, sustained growth, quality, productivity |
| **Surgical Instruments Cluster Firms** | | | |
| I | USA, Europe, Canada, Middle East | A wide product range of low-tech electro-mechanical instruments | • Quality, productivity  
• Specialises in a electro-mechanical instrument, broad product range |
| J | Europe | A wide product range, expertise available from OEM | • Quality, productivity  
• Increase product range, collaboration international manufacturer |
| K | Europe, USA, Japan | Broad product range | • Quality, productivity  
• Brand name in Japan |
| L | USA, Europe | Selected product range | • Quality, productivity  
• Specialist in limited Gynae & Obstetrics and dental instruments, quality |

Table 3: General Characteristics of interviewed firms
**Research questionnaire**

An exploratory research using semi-structured questionnaire was carried out to populate the Table 4. Firms were asked about capabilities initiatives such as process, product or management system technologies acquired/assimilated/ upgraded to increase their performance such as increased market share, productivity, product portfolio. Among the initiatives those initiatives were shortlisted which involved ITT. For each initiative, the questions were asked to identify enablers/ constraints affecting initiative: what are the technological aspects emphasised during the TT? The employee related problems faced during the technology transfer and strategies used to overcome those problems?

Table 4 also helped to compare if previous initiative(s) affected any future initiative.

**Table 4: Layout of Questionnaire**

<table>
<thead>
<tr>
<th>S.No</th>
<th>ITT initiative</th>
<th>Type of Initiative (process/ product/ management)</th>
<th>Factors affecting initiative (enabler/ constraint)</th>
<th>Outcome of Initiative (market share/ productivity/ increased portfolio)</th>
</tr>
</thead>
</table>

**Results and Discussion**

From the list of capabilities development initiatives carried out by each firm, those initiatives were selected which involved international technology transfer and are shown in Table 5, which shows that in leather cluster only one interviewed firm took ITT initiatives, in sports goods cluster all four interviewed firms took ITT initiatives, while again only one firm in surgical instruments cluster was involved in ITT initiatives.

Further, it can be seen from Table 5 that most of ITT initiatives involve transfer of process technology for improving productivity and quality of existing processes for mature products belonging to
low value-added markets. Also, few ITTs involved generally product technology transfer for adding new products to the product portfolio, but the products incorporated are mature products already existing in international markets and belong to low-value added markets. There are also two instances where firms successfully acquired international accreditations to secure their targeted markets. Thus, most of ITT initiatives involved process and product technology transfers. Since, these ITTs involve technology transfer of low-complexity for mature products for low-valued added markets abroad and firms have not improved upon acquired technologies, thus as per Lall and Kim categorisation (Lall, 2001, Kim, 2001), the firms appear to be in acquisition stage.

Further, the expertise for required initiatives did not exist in their respective clusters which could be an indicator that these are competitive firms in their respective clusters and to sustain their competitiveness they are seeking collaboration from abroad. However, interviewed firms mentioned certain factors constraining technology acquisition such as lack of vistas for identification of suitable technology, expertise required to acquire the selected technology and lack of resources for technology acquisition. Accordingly, firms mentioned going into cooperation with their foreign customers for identification of requisite technology to produce products to their satisfaction. Also, firms mentioned visiting international expos as a source for identification of suitable technologies. Cooperation with suppliers, customers also helped to mitigate financial risks involved with ITT.

Moreover, ITT initiatives do not show any coordination with local development agencies nor any cooperation with local academia, which are more involved with improving quality and productivity of existing processes and product of targeted clusters, as discussed in section 0. Thus, this could be an indicator of misalignment of operational scope of academia-development agencies and researched SMEs’ competitive priorities. Therefore, suitable technology identification and facilitation of acquisition of identified technology could be scope of SMEs development agencies.
Overall, the intended outcome of most of ITT initiatives were productivity, improved quality, consolidating existing customer base or capturing new customers in same low-end market, and these outcomes are not a source of sustained competitiveness. Also, no ITT initiative was mentioned where a firm improved upon its existing capabilities to produce better value added products for higher end markets.
<table>
<thead>
<tr>
<th>Industrial cluster</th>
<th>Name of firm</th>
<th>ITT initiative</th>
<th>ITT initiative type (process, product, managerial)</th>
<th>Factor(s) affecting ITT initiative</th>
<th>Constrain for ITT initiative</th>
<th>Enabler for ITT initiative</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| Leather cluster    | Firm A       | Setting up of production line | Process upgrading |                                               | Existing workforce not trained on modern lines | Hiring of foreign consultants to train local workforce | • Increased productivity  
• Improved quality        |
| Sports goods cluster | Firm E     | Hockey manufacturing | Process upgrading |                                               | Expertise not available within firm or cluster | Collaborated with customer to train local workforce according to their requirements | • Secured existing market |
|                     |              | Pre-stretched leather football manufacturing | New, mature product introduction in firm |                                               | Expertise not available within firm or cluster | Collaborated with customer to train local workforce according to their requirements | • Addition to product portfolio  
• Secured existing market |
|                     |              | Artificial leather football manufacturing | New, mature product introduction in firm |                                               | Expertise not available within firm or cluster | Collaborated with customer to train local workforce according to their requirement | • Addition to product portfolio  
• Secured existing market |
|                     | Firm F       | Sports shoes manufacturing | Product upgrading |                                               | Expertise not available within firm or cluster | Collaborated with customer to train local workforce according to their requirement | • New product  
• New customers |
|                     | Firm G       | Fair trade certification | Managerial upgrading |                                               | Expertise not available within firm or cluster | Hired foreign consultant to achieve it | • Addition to product portfolio |
|                     |              | Football manufacturing | Process upgrading |                                               | Expertise not available within firm or cluster | Collaborated with German customer to improve manufacturing process | • Process improvement  
• New customer |
<table>
<thead>
<tr>
<th>Surgical instrument cluster</th>
<th>Firm I</th>
<th>FDA approval</th>
<th>Managerial upgrading</th>
<th>Expertise not available within firm or cluster</th>
<th>Hiring of consultant, internal R&amp;D</th>
<th>New customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm K</td>
<td>Improved products</td>
<td>Process upgrading</td>
<td>Expertise not available within firm or cluster</td>
<td>Collaboration with German customer</td>
<td>Own brand name in Japan, New market</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: List of initiatives taken by interviewed firms involving ITT
Conclusions and Recommendations

In this research those firms were interviewed which were in operation for more than twenty years and commanded a repute in their respective clusters. However, at operational level these firms were apparently struggling to incorporate mature process and product technologies from developed countries and needed training from foreign trainers and consultants to operate the incorporated technologies. Further, the incorporated technologies were of low-complexity and belonged to low-value added sector, which, in the long-term, is not a source of competitive advantage at international level, as discussed in literature review. Thus, apparently, the interviewed firms appear to be in acquisition stage of TCU process even after more than two decades of existence.

Also, the research shows some policy level shortcomings. First, ITT initiatives do not show any development organizations involvement. It could be an indicator that development organizations are taking a macro approach- cluster level, which does not take into account of needs of firms with varying levels of capabilities and competitive priorities existing in cluster(s). Also, the scope of development agencies in Pakistan is more at operational level- improving productivity and quality, while the interviewed firms were using ITTs to appropriate new, mature processes and products from abroad for market consolidation and increased financial performance. Thus, development organizations might need to adopt a micro approach-firm level, to cater to the needs of competitive firms of cluster(s). Second, initiatives do not show industrial-academic collaboration, and future research may be conducted to investigate this issue further. Third, CFCs have been established but they do not appear play a role in observed ITTs.

Thus, on technological capability upgradation front, certain challenges need to be addressed for moving from acquisition to absorption to innovation stage in any manufacturing
sector in the context of a developing country such as Pakistan. First, suitable sectors which need development or could be developed need to be identified. Second, their technological sophistication levels need to be identified/ categorized. In case of Pakistan, we are manufacturing low-value added items in low-technology sectors such as garments manufacturing, reusable surgical instruments manufacturing, plastic molding. Third, it needs to be determined if these sectors or clusters need to go for capacity increase, product portfolio increase (which are not a source of sustained competitive edge in times when global trade barriers are coming down) or better value-added processes and products. Accordingly, as a fourth step, suitable infrastructure needs to be identified and put in place to acquire the requisite technology (machines, IT equipment). Fifth, human resource should be identified and trained to understand how this imported technology functions. Sixth, organizational changes such as new production methods, new production layout, and new marketing skills need to be put in place to acquire, absorb and exploit new technology.

Further, on CFCs front, similar role could be played by vocational institutes already established in the industrial clusters. Latest machinery and training at the institutes could result in better trained manpower, benefitting the local cluster. A stronger and better trained human resource helps to upgrade existing industries capabilities. Thus, apparently, CFC is a duplication of job/ responsibilities which eat into already scarce resources of a developing country. Therefore, the ideas from other countries should be transplanted and implemented according to local conditions and a strategic vision.

In sum, government should be talking to all the stakeholders in a sector or cluster, such as academic institutions, trade bodies, SME executives and development institutions in one language, which is continuous technological capability upgrading and accordingly cluster level capabilities upgradation roadmap should be developed, implemented and monitored.
As for the shortcomings of the research, the research sample was limited, only one person per firm was interviewed. Further, no official data on SMEs performance exists on Sialkot industrial clusters. Hence, selection of firms was based on relative factors such as their years of operation, reputation among peers, and scale of operations. Thus, future research may be carried out with larger sample and better quantitative SMEs selection criteria, which would help to draw more robust conclusions and recommendations.
References


Beneficiary Assessment Based Evaluation of SME Policy of Pakistan

Author:
Ali Sadiq

Contact Details:
Ali Sadiq: ALI.SADIQ.CH@LIVE.COM

Address and Affiliated Institution:
University of Management and Technology, Lahore
Abstract

The study undertook first ever evaluation of SME Policy of Pakistan. The objective of study was to evaluate policy, with perspective of its beneficiaries, and draw lessons for further improvements. Respondents of study included representatives of associations of 09 high growth SME sector including textile, auto-parts etc.

The study used beneficiary-based evaluation framework. Beneficiaries are key stakeholders of SME Policy; however, it has been observed that often voices of beneficiaries are overlooked by bureaucracy and powerful institutions of state, such as State Bank of Pakistan. Beneficiary based evaluation is therefore considered one of the most important approaches for policy evaluation. Qualitative data were collected through in-depth interviews of representatives of 09 associations of high growth SME sector. Data analysis was done through NVivo Packagge for coding data, and developing mind maps and project maps. The result includes perspectives of beneficiaries about the relevance of policy content, achievement of its intended outcomes, impact of policy on SME growth and recommendations for improvements.

Keywords: SME Policy of Pakistan, Evaluation of SME Policy, Beneficiary assessment approach.
Introduction

All across the globe, countries formulate SME policies for the development of SME sector. The regulatory bodies design the Policy, implement it and then evaluate it. According to ERIA (2014), all 10 member ASEAN countries (Brunei, Singapore, Cambodia, Indonesia, Malaysia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam) have SME Policies for the development of SME sector. Each member countries hold regulatory body that monitors the SME Development nationwide. For example, Standard, Productivity and innovation Board of Singapore (SPRING Singapore) is a regulatory agency under the supervision of Ministry of Trade and Industry answerable for assisting SMEs in Singapore. Likewise, SME Corporation Malaysia (SME Corp.) was established to formulate SME policies and coordinate accordingly with different agencies for its better implementation (ERIA, 2014).

In addition to all ASEAN member countries, there are quite a few other countries too that have well documented SME Policies for the development of SME sector. SME Policy of Tanzania was documented by ministry of trade (Trade, 2003). SME sector of Sri Lanka is under supervision of Ministry of Commerce (Commerce, 2005).

According to ERIA (2014), all ASEAN member countries have SME Policies. SME Policies are reviewed and evaluated to ensure its implementation. In this regard, Singapore’s development policies were previously reviewed in 2009-2010 by Economic Strategies Committee (ESC). Likewise, UNIDO (2012) reviewed SME Policy of Tanzania. Likewise, SMRJ (2008) evaluated SME Policies of 6 ASEAN member countries that included; Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. The evaluation was carried out using semi-structured interviews with the SMEs.
Small and Medium Enterprise Development Authority (SMEDA) upholds the task for the development of SME sector in Pakistan. In collaboration with government bodies, SMEDA came up with 1st SME Policy of Pakistan in 2007.

The Policy was introduced with the objective of providing a long-term framework for achieving economic growth in SME sector (SMEDA, 2007). The aim of the Policy was to develop SME sector and highlight core issues that SMEs face while operating in the market. The Policy was designed to address all pertinent areas for SME development including business environment, access to finance, human resource development and supporting technology up-gradation and marketing. The Policy furnished recommendations for each of these areas. Moreover, given that no single SME definition was prevalent in Pakistan, the Policy came up with single definition. It highlighted that SME development should be central concern of all economic growth policies; and encouraged private sector to play its due role in successfully implementing the Policy and to ensure that government support and priorities for SME sector are in right direction (SMEDA, 2007).

Policy Evaluation is considered as a medium to measure the purpose and efficacy of the Policy. It acts as a linkage between the actions of Policy and its impacts on the end users. SME Policy of Pakistan had set clear guidelines that its evaluation would be conducted regularly for ensuring its performance. However, to date, no evaluation exercise of SME Policy has been conducted in Pakistan. This evaluation gap has created problems on the fronts of measuring what worked and what did not, as well as drawing lessons for future policies for SME development in Pakistan. In this background, the present study aims to undertake first ever evaluation of SME Policy of Pakistan. Major focus would be to analyze the robustness of the Policy, designed in 2007, outcomes it has achieved till date, and to assess if Policy is being implemented as per the plan.
This study was aimed at undertaking first ever evaluation of SME Policy of Pakistan, formulated in 2007 by the Government of Pakistan. The study contributed towards assessing efficacy of SME Policy, its implementation, as well as drawing lessons for Policy review.

Results of this study were shared with concerned agencies which would contribute towards SME development and add to identification of areas to which SME policy have been beneficial and the ones that still need more focus. It would assist policy makers in major decision making pertaining to SME development.

**Literature Review**

**Significance of SMEs in developing countries**

In developing countries of South Asia, SMEs constitute around 97% of national industry and add up to 40-60% of GDP in national economies. SMEs are also considered important because they provide job opportunities in far flung areas. According to some estimates SMEs provide 70% of total employment in rural areas (Kamesam, 2003; Nepal, Karki, & Niraula, 2006). SMEs are considered to be backbone of economic growth of both developing and developed countries (Zamberi, Rani, Shima, Kassim, & Kasmah, 2010). It is believed that SMEs are the main source for diminishing poverty, formulating base for employment, social boosting, and escalating national economy (Akhtar, Raees, & Salaria, 2011). SMEs largely contribute in creating employment, enrich economic growth, create awareness, promote innovation and increase knowledge resources. SMEs address unemployment concerns by adjusting low capital per employment, reducing investment risks, maximize the utilization of local raw material and safeguard equality in product and income distribution. In accordance to all these, SMEs play an essential role in evolving underdeveloped economies (Syed Manzur, 2008).
Role of SME Policies in Developing Countries

SMEs have a huge economic contribution throughout the globe. SME sector in countries like Tanzania, Sri Lanka and ASEAN member countries has been flourishing in national and international markets because of their SME Policies. According to ERIA (2014), all 10 member ASEAN countries (Brunei, Singapore, Cambodia, Indonesia, Malaysia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam) have SME Policies for the development of SME sector. Each member countries hold regulatory body that monitors the SME Development nationwide. For example, Standard, Productivity and innovation Board of Singapore (SPRING Singapore) is a regulatory agency under the supervision of Ministry of Trade and Industry answerable for assisting SMEs in Singapore. Likewise, SME Corporation Malaysia (SME Corp.) was established to formulate SME policies and coordinate accordingly with different agencies for its better implementation (ERIA, 2014).

In addition to all ASEAN member countries, there are quite a few other countries too that have well documented SME Policies for the development of SME sector. SME Policy of Tanzania was documented by ministry of trade (Trade, 2003). SME sector of Sri Lanka is under supervision of Ministry of Commerce (Commerce, 2005).

According to ERIA (2014), all ASEAN member countries have SME Policies. SME Policies are reviewed and evaluated to ensure its implementation. In this regard, Singapore’s development policies were previously reviewed in 2009-2010 by Economic Strategies Committee (ESC). Likewise, UNIDO (2012) reviewed SME Policy of Tanzania. Likewise, SMRJ (2008) evaluated SME Policies of 6 ASEAN member countries that included; Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. The evaluation was carried out using semi-structured interviews with the SMEs.
Policy Evaluation

Policy evaluation is linked with methods that study the implementation, impact and content of the Policy (Patton, Sawicki, & Clark, 2015). Policy evaluation has a huge impact on not only its end users but it also for the entire Policy process. Patton, Sawicki and Clark (2015) suggested that evaluation assists in documenting the Policy development, exhibits the significance and impact of Policy, highlights the need of amendments for Policy in coming future and lastly Policy evaluation provides liability for the resources that are invested. Policy evaluation is considered to be essential and beneficial in highlighting issues that Policy beneficiaries are facing. Policies are designed for development of both organization and for whom the policies are being made. They include certain suggestions and recommendations. Policy evaluation is done to analyze that either the Policy is heading towards right track as per the Policy goals (Patton et al., 2015).

Policy evaluation applies multiple evaluation approaches to study the content, implementation or the impact of Policy. They include: Appreciative Inquiry, Beneficiary Assessment, Case Study, Collaborative Outcomes Reporting, Contribution Analysis, Critical System Heuristics, Democratic Evaluation, Developmental Evaluation, Empowerment Evaluation, Horizontal Evaluation, Innovation History, Institutional Histories, Most Significant Change, Outcome Harvesting, Outcome Mapping, Participatory Evaluation, Participatory Rural Appraisal, Positive Deviance, Randomized Controlled Trials, Realist Evaluation, Social return on Investment, and Utilization-Focused Evaluation (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2016). Beneficiary assessment approach is a qualitative approach that gives an in-depth understanding about the experiences shared from other person’s point of view (Shutt & Ruedin, 2013).
**Beneficiary Assessment Approach**

Beneficiary assessment approach is a tool for managers who focus to improve the quality of current or upcoming development operations by taking insights from the beneficiaries of the initiative. The approach is an efficient medium of inquiry to evaluate values and behavior of the ultimate beneficiaries of the development initiatives about the current and upcoming economic or social change. Kirk and Miller (1986) highlighted that beneficiary approach is a “qualitative research that fundamentally depends on watching beneficiaries of the initiatives in their own territory and interacting within them in their own language, on their own terms”.

The decisive goal of beneficiary assessment theory is to expose the understanding and meaning the beneficiaries give about certain aspects of their lives (Salmen, 1995). This exposure further leads toward Policy or operation development so that people can be assisted with better initiatives in future. This requires a close interaction amongst the practitioner of the approach, the beneficiary and the development manager (Evaluation, 2016). Beneficiary assessment approach does not rely on questionnaire based survey but also signifies the importance of acquiring authentic qualitative in-depth information about socio-cultural situations of beneficiary population (Shutt & Ruedin, 2013). This information is highly useful for managers and most importantly for the Policy makers who are considered to be responsible to develop people’s lives (Weinar, 2019).

Another significant notion about beneficiary assessment approach is that the beneficiaries for whom the development or Policy is being designed, their voices are not too loud and clear to be heard by the managers of these Policymakers (Musavengane, 2019). Particularly in developing countries managers and Policymakers do not listen to the queries of beneficiaries. Either they don’t hear it intentionally or are not well trained to do so, but eventually the key point is that beneficiaries
are not heard (Salmen, 1995). Beneficiary assessment approach for such situations is considered to be a medium of intermediation.

A well-crafted beneficiary assessment approach inspires people/beneficiaries to be open and express their views loud and clear that leads to better development of the Policy or the program (Hunt & Grigorash, 2008). To be more specific, an evaluation through beneficiary approach serves as a missing link amongst the Policy makers and the beneficiaries (Groves, 2015). This intermediation provides an opportunity to create awareness that policies are made for people and the beneficiaries should play a key role in formulating it in best fit way for their own good (Matulewicz, Bradley, & Wagner, 2019).

The major focus of beneficiary assessment is towards the beneficiaries to be benefited by the Policy (Van den Nieuwenhof et al., 2019). The target of the approach is decision making of the managers who shape up the Policy. There are multiple approaches that are used for Policy evaluation. Amongst these, Beneficiary Assessment approach is most suitable for present study. Beneficiary assessment acts as an intermediary between Policy makers (managers) and beneficiaries. SME Policy evaluation also requires direct interaction with the beneficiary and to know either the Policy is going on the desired track. Therefore, beneficiary assessment approach is best fit for present study.

**SME Policy: A Case of Pakistan**

SMEs in Pakistan have huge contribution in GDP too. According to the figures of Economic Survey of Pakistan by Shah (2014) SMEs have shared roughly 40% in the annual GDP of the country and provided roughly 80% employment to non-agricultural labor force. In preview of this importance of SMEs, SMEDA along with other stakeholders came up with SME Policy of Pakistan
in 2007. The Policy was a result of a task force comprising federal, provincial stakeholders along with SMEDA (SMEDA, 2007).

The core objective of SME Policy was to formulate a short and medium to long-term Policy that could assist in implementing mechanisms for achieving higher economic growth, based on private sector development of SME (SMEDA, 2007). The scope of SME Policy circled around four major areas of SME development. They included Business Environment, Access to Finance, Human resource development and Support for technology up-gradation and marketing (Shahid, 2008). In addition to these four vital issues, SME Policy also added up certain mechanisms that highlight few essential elements for SME development.

There was no single definition of SMEs in Pakistan before formation of SME Policy. Deficiency of single and overall accepted definition creates problems for target firm identification, arranging developmental programs, collecting data and monitoring the progress also becomes difficult (Shahid, 2008). SME Policy put forward a unified single definition along with the recommended that Government should embrace single SME definition that is acceptable to both private and public-sector institutes (Hyder & Lussier, 2016).

According to (Shahid, 2008) labor, fiscal and enterprise regulations of federal and provisional governments before Policy did not focus on Business Environment. SME Policy suggested several recommendations to enhance to refine Business environment (Hyder & Lussier, 2016). According to Economic Survey of Pakistan by (Shah, 2014) SME Policy had advised several measures for promoting SME access to finance including Islamic mode of financing. The Policy recommendations were expected to create awareness to give SMEs the financing opportunities (Shahid, 2008).
SMEs hire their HR from higher education institutes or from technical background. Both are not trained or educated about the SME sector and are therefore unable to address the issues of SMEs (Shahid, 2008). Likewise, multiple recommendations were laid up for technology purgation (Amjad & Burki, 2015). Policy highlighted the problem that education and social system of Pakistan does not inspire entrepreneurship in youth. Policy recommended that primary and secondary education curriculum should be restructured and entrepreneurship should be promoted amongst students (Hyder & Lussier, 2016).

The Policy included an Evaluation component that was envisaged to monitor its implementation and evaluate outcomes to ensure its improvement (Amjad & Burki, 2015). In addition to this SMEDA was assigned to publish Annual report for SME development to the parliament. The Policy also highlighted that SME surveys will be carried out to access the Policy implementation and evaluate where support mechanisms are necessary (Shahid, 2008).

**Research Objectives and Questions**

The objective of the study was to undertake “Beneficiary Assessment” based evaluation of SME Policy of Pakistan. The study assessed efficacy of SME Policy, as perceived by its beneficiaries, and drew recommendations for improvements/revision.

Research questions for present study are:

1. What are perspectives/views of beneficiaries about the appropriateness of
   - SME development vision
   - Thematic areas of SME Policy?

2. To what extent beneficiaries perceive SME Policy successful in terms of,
   - Achieving intended outcomes
   - Impact of SME Policy?
3. What are beneficiary’s recommendations for improvement/revision of SME Policy?

**Methodology**

Current study encountered qualitative research. Researcher physically visited the beneficiaries of the SME policy to know their experience and views about the SME Policy of Pakistan. Researcher themselves was a key instrument for collecting data using multiple sources such as interview and audio recordings of the beneficiaries. Researcher gave sole importance to the meanings and experiences that beneficiaries shared about the Policy. In this regard, the study followed phenomenology research design to evaluate the SME Policy of Pakistan. SME Policy is a phenomenon that was studied. Beneficiaries being affected by the policy shared their lived experiences about the Policy.

While using phenomenology, interview Protocol form was designed for better understanding of the study for beneficiary. The Protocol form included brief overview about the study, and its purpose. It involved the details of beneficiary, expected questions of interview and time. Beneficiaries were asked in protocol form if they had any question before interview formally started. They were also asked if researcher could record the interview. Purposive sampling can be discussed as selecting the respondents/participants that are easily accessible and are most suitable to share their experience about specific phenomenon (Thorne, 2008). Current study has used purposive sampling for selecting participants for the interviews.

According to (Creswell, 2013) sample size for phenomenology research design ranges from three to ten interviews. Likewise, SMEDA highlighted 13 high growth priority SME sectors in its annual report (SMEDA, 2014-2015). In researcher’s sight, these sectors were real beneficiaries of the Policy. All 13 sector associations were contacted through official channel. Out of 13 sector associations, 9 associations gave positive response for interviews.
Researcher finalized the date, time and site for conducting the interviews with beneficiaries. Secretaries of all 8 associations were interviewed at their offices in Lahore. However, one secretary of association located in Sialkot, was in Lahore for chairing a conference at Pear Continental (PC), Lahore. Researcher fixed the meeting accordingly and interviewed the respondent at PC, Lahore. These beneficiaries helped researcher in understanding their experience about the SME policy which led towards answering the research questions.

Since, SMEDA identified thirteen high growth SME sectors in its annual report SMEDA (2014-2015), Secretaries of nine high growth sector associations were interviewed for the current study. The associations include; Pakistan Association of Automobile Parts & Accessories Manufacturers (PAAPAM), Pakistan Gloves Manufacturing and Exports Association (PGMEA), Pakistan Hosiery Manufacturers & Exporters Association (PHMA), All Pakistan Textile Mills Association (APTMA), Rice Exporters Association of Pakistan (REAP), Pakistan Steel Melters Association (PSMA), Pakistan Dairy Association (PDA), Construction Association of Pakistan (CAP), and Pakistan Gems and Jewelry Development Company (PGJDC).

Audio recordings of the interviews were saved electronically and field notes were organized and maintained in separate file in hard form. The audio recordings were then transcribed and were saved in multiple electronics devices. The transcribed data was used for coding in NVivo Pacakge (a data analytical tool for qualitative enquiry). In NVivo Package main themes were categorized from the transcripts that further assisted in formulating mind map and themes.

Analysis and Findings

Qualitative data analysis is an essential and vital process for interpreting and reviewing the qualitative data. The coding of data was done after reading the transcripts a number of times. NVivo 11 Package was used to manage the data that was gathered in the form of transcripts.
Researcher recorded the interviews by the consent of the beneficiaries. They agreed upon sharing their association’s names but restrained the researcher from using their names in the study. However, it was mutually agreed that their designation would be shared in the study.

The secretaries of nine associations gave interviews in Urdu, Punjabi and English language. The recorded interviews were then transformed in the form of transcripts. Urdu and Punjabi language interviews were translated in English language for transcriptions. Transcripts were used to derive the relevant themes for the study. The themes emerged after coding the transcripts in the NVivo software. Main nodes were made which further followed by sibling and child nodes. Beneficiaries’ responses were coded in the nodes and sub nodes accordingly.

There were 4 main nodes that further had sub nodes in them. One of the main nodes was Relevance of policy content which had 12 sub nodes; second main node was of intended outcomes of SME which had 41 sub nodes; third main node was of impact of SME policy which had 13 sub nodes and last main node was of recommendations which had 21 sub nodes. The tabular form highlighting the nodes and its sources is shown in table (1) given in annex:1.

All beneficiaries were against the relevance of SME development vision for the policy document. Representative from APTMA mentioned, The Development vision framework mentioned is just a diagram I think. I do not think that any of the points mentioned have been achieved in 2015. Most importantly it’s non-realistic. Therefore, I do not think it should be part of policy.

One of the common reasons highlighted by the beneficiaries was that SME Development is not precise. Representative from PDA commented; It has tried to bring the issues of SMEs at front. However, I think that this is not the good way to project them. They should have been long term but specific.
Beneficiaries felt that thematic areas highlighted in the SME policy content are highly relevant for the document. APTMA representative added, *The thematic areas that you have mentioned, these all are basic and core issues that SME’s are still facing while operating in Pakistan.* The Project Map of Relevance of Policy Content is shown in figure 1 given in annex:1.

One of the key areas of Researcher was to identify either intended outcomes of the SME Policy have been achieved or not. Researcher questioned beneficiaries about the achievement of intended outcomes keeping in view SME Development vision and thematic areas highlighted in the Policy. The Project map of Intended outcomes of SME Development Vision is shown in figure 2 given in annex:1.

Beneficiaries responded that Policy hasn’t received any intended outcomes for SME Development Vision. Representative from CAP quoted; *The vision 2015 diagram in the policy is just a formality I think. My observation is that the vision was not set keeping in view the real economic conditions of Pakistan.*

Similar practice as of SME Development vision was practiced for thematic areas too. The project map for intended outcomes of thematic areas is shown in figure 3 given in annex:1.

The beneficiaries responded that the intended outcome mentioned in the Policy for SME definition has not been achieved. Spokesperson from APTMA quoted, *I can strongly raise an argument that till date, every institution is following its own SME definition. State Bank, government institutions and all other development agencies are following their own definition.* The Project Map of Intended outcome for SME Definition is shown in figure 4 given in annex:1.

When asked about reason by representative from PGMEA, he responded, *The SME Definition that you have mentioned it is of international standard. The policy makers took the idea of the definition from international community and introduced a similar definition in Pakistan too.*
Representative from PDA added; *it is widely acknowledged that SME sector of Pakistan is highly heterogeneous, which means that our sector varies from agriculture, to light engineering, to cutlery, to sports goods and to many so and so forth.*

There were quite a few respondents who mentioned that business environment has achieved its outcomes to some extent. Respondent from REAP appreciated the efforts of government. He quoted; *If you talk about infrastructure, well to some extent roads have provided some ease to SMEs. But infrastructure is vast terminology. It includes a lot of facilities.* The Project Map for Intended Outcomes of Business Environment is shown in figure 5 given in annex:1.

When asked from beneficiaries about reasons of not achieving outcomes Representative from PGJDC quoted, *If you talk about property rights, government has not been supportive here too.* Spokesperson from REAP was quite straightforward about SME act. He responded, *I have never heard of any SME act. Even if there is any, I don’t see its implementation. So for me, there is no SME act.* Respondent from REAP mentioned, *I see SME help desks in Chamber offices and few other government institutions. But are the SMEs getting benefit out them? I don’t think so. I would say very little percentage is getting benefit.* Focal person from PAAPAM quoted; *PAAPAM needs skilled labor. In policy there was recommendation that government will ensure and cater the issue of skilled labor.* Representative from PDA added; *Business Environment, when I read this policy, It seems that they are trying to take issues as if they are static.*

Beneficiaries’ perspectives were that not even a single intended outcome has been achieved for access to finance. When asked about reasons, representative from REAP mentioned, *SMEs have to face uncountable complications if they ever visit any of these institutions to apply for loans.* *The terms and conditions that institutions have for the loans are way ahead to be achieved by any of SME.* The Project map for Access to Finance is shown in figure 6 in annexure.
Spokesperson from PGMEA quoted, *Commercial banks are not supportive at all.* Focal person from APTMA quoted, *SME bank is not supportive at all.* PGJDC representative quoted; *Again here too I would add up that there is no implementation mechanism for implementing any of these recommendations.*

SME Policy addressed **Supporting HRD, Technology Up-gradation and Marketing** as a thematic area in the policy document. Focal person from PAAPAM appreciated the efforts by quoting, *In terms of technology, we are being supported. We are being facilitated to import best machinery, best raw material in the world at 0% duty.* The Project map for Supporting HRD, Technology Up-gradation and Marketing is shown in figure 7 in annexure.

Focal person from PDA responded; *I don’t see any such curriculum. The reason here is the same that they were not clear about this.* Representative from APTMA responded, *If you talk about promotion and marketing of the SME product, I will say there is just nothing. All SMEs are doing efforts own their own.*

According to beneficiaries, not even a single intended outcome has been achieved about **entrepreneurship development.** Representative of APTMA quoted; *SMEs are lacking in the element of creativity. All SMEs are following same old traditional resources to operate. There is hardly any creative idea coming from any SME.* Representative from CAP also quoted, *Here too SMEDA has not played its role is a proper manner. It hasn’t been active in my sight to promote entrepreneurship in SMEs.* The project map for Entrepreneurship Development is shown in figure 8 given in annex: 1.

Some beneficiaries felt that there hasn’t been any Impact of Policy on SME sector, when further asked, they highlighted few reasons of no impact and lastly few also emphasized on positive
impacts that policy has laid on SME sector. The project map of impact of SME Policy is shown in figure 9 given in annex:1..

Representative from REAP quoted; Well to be honest with you, in my observation the policy has not laid any single impact on the SME sector. Researcher then asked reasons from these beneficiaries. Focal person from REAP quoted, A SME policy of which hardly anyone is aware of, what impacts can anyone expect from it. Representative from PGMEA quoted; The policy was never communicated to its beneficiaries. PAAPAM representative added, There is a big communication gap. Private and public SME is hesitant is going to Government to resolve their issues. Representative from REAP quoted, SMEDA role in preview of this policy has been nothing. Focal person from PDA quoted; I don’t see any mechanisms for attributing the changes that have happened.

Focal person from PSMA was quite positive upon the impact. He quoted, The overall impact of the SME Policy has been very positive. He identified the new initiatives taken in preview of SME Policy. He added, new initiatives were taken in the areas of SME Financing, Technical Up-gradation, and Human Capital Development for SMEs.

The last part of interviews with beneficiaries included discussions about the recommendations that they had for improvement of SME Policy. The project map of Recommendations for SME Policy is shown in figure 10 in annexures.

Representative from APTMA added; I don’t see any check and balance of the policy from the policy makers. There should be one. Representative from PSMA clarified by quoting, The SME policy should be properly communicated to all stakeholders. Awareness campaigns should be run at district levels and all chambers of commerce and industry.

Beneficiaries felt the need of strong monitoring and evaluation system in the current SME Policy. Representative from PSMA added, A proper monitoring and evaluation system should be
defined to measure the outcomes of SME Policy. Focal person from APTMA talked about regulatory body for evaluation. He quoted, *There should a body who should evaluate the policy in proper manner without influence of any political power or any individual.*

When asked from REAP about evaluation tenure, his comment was, *Well I would say that the policy should be revamped annually.* Focal person from PDA commenting on M&E quoted, *The policy has not even allocated resources for monitoring and evaluation. I think that SMEDA should take monitoring and evaluation project as a PSDP funded project and take the proposal to planning commission.*

Recommendations were also laid about Policy translation. Representative from PGMEA felt, *Policy should be documented in Urdu language as well. A lot of SMEs are unable to understand English.* Representative from REAP quoted; *I think that HRD, technology and marketing are all equally important issues. Therefore, they should have been addressed separately.*

Beneficiaries were questioned about the other issues that should be addressed in the Policy. APTMA representative responded; *Corruption is one of the most major issue of SME.* Spokesperson from PGJDC mentioned; *Economic instability should have been addressed. Continuous fluctuations in economic conditions create barriers for SMEs to import and export.* APTMA representative added, *I would say training and awareness is another major issue that SMEs face. They are unaware to operate and interact with the market.* REAP mentioned land leasing by quoting, *Land leasing also needs to be addressed.*

Representative from PGJDC quoted; *Terrorism should also be there. SMEDA and other policy makers must have come across how to cater for continuous operationalization of SME sector.* Focal person from PDA added; *The only thing I would mention here is that policy seems to have neglected that Pakistan is a myopic state. And, mindset is the major one. Government of Pakistan*
has to do something on this. Focal person from PSMA mentioned, Similarly, the objectives against some of the policy statements were either not available or were not clear. Specific KPIs should have been identified.

The findings about relevance of SME development vision in SME Policy were that SME Development vision is not relevant for the SME Policy document. The reasons included; the development vision is not precise, non-realistic as per economic conditions of Pakistan. Another major focus of SME policy was towards thematic areas. Beneficiaries admitted that all thematic areas addressed in the policy were highly relevant for the policy.

About achievements of intended outcomes for SME Development Vision the findings were; the Development vision is too broad and vague, it has not achieved main points of Vision, there was lack of planning and the Development Vision was not aligned with Economic Conditions of Pakistan.

The Researcher questioned the beneficiaries about the achievements of intended outcomes for thematic areas. Findings for Access to Finance included; SMEs are still facing hurdles in loan, there is no support from Commercial Banks, no support from SME Bank, no financial support from government end, and lastly there isn’t any implementation mechanism.

The findings were for business environment policy was that it has achieved intended outcomes for infrastructure. The areas where the policy hasn’t achieved any intended outcomes included; property rights issues, No SME act, no support for SMEs from SME help desks, no skilled labor available and the business environment issues seem to be static.

The policy hasn’t achieved any intended outcomes for Entrepreneurship Development. The reasons included; lack of creativity and no role of government in promoting and facilitating entrepreneurship amongst SMEs.
The findings for SME Definition were that Policy hasn’t been any achievements of intended outcomes for SME Definition. The reasons identified included; No single SME definition, definition is of International standards, and lastly SME sector is heterogeneous.

The findings depict that there have been achievements for technology-up gradation. However, policy hasn’t achieved intended outcomes in few areas. The findings were; there is No SME Curriculum, No promotion and marketing, and no clarity on technology up-gradation thematic area.

Researcher questioned the beneficiaries about the impact of SME Policy on SME sector. The findings were that few beneficiaries felt that there hasn’t been any impact of SME Policy on SME sector. When asked about the reasons, the findings were; lack of awareness, lack of communication, no support from SMEDA, and no mechanism to attribute changes. Few had a stance that there has been positive impact of policy on SME sector. The findings about positive impact encompassed; new initiatives taken in the context of finance, Technical Up-Gradation and Human Capital Development, facilitation of Public sector institutions, and banking sector introducing new products.

Beneficiaries were asked to give recommendations for improving the essence of SME Policy. The findings accomplished incorporated; have Check & Balance of Policy, Proper Channel of Communication for Policy, Policy should be translated in Urdu language, HRD, Technology Up- Gradation and Marketing should be addressed separately in the policy and there should be Monitoring and Evaluation of Policy that should include regulatory body for evaluation, monitoring & evaluation tenure and lastly allocate resources for M&E.
Discussion

The findings show that beneficiaries didn’t find SME Development vision relevant for the Policy document. However, they considered thematic areas highly relevant. In SME Policy of Sri Lanka, the development vision of SME sector is more inclined towards increasing per capita income (Commerce, 2005). Likewise, development vision of Tanzania in its SME Policy is similar to that of Sri Lanka. The SME development vision of Tanzania is to have dynamic and vibrant SME sector that shall utilize all available resources to accelerate sustainable growth. The Researcher perspective about the reason is that SME development vision of Pakistan is not clear as compared to other International countries’ SME vision. However, as per understanding of Researcher, SME development vision is key element in the SME policy. It should be clear, achievable, practical, realistic and precise.

Another major focus of SME policy was towards thematic areas. Similar to the issues addressed in SME policy of Pakistan, many other countries SME policies also consider these issues highly relevant in their policy documents. SME Development Policy of Tanzania (Trade, 2003) addressed; SME definition, Business development services, entrepreneurship development, physical infrastructure, business training, technology, marketing, access to finance, rural industrialization and other cross cutting issues. According to SME Policy index by ERIA (2014) 10 ASEAN member countries have SME policies that address; access to finance, International market expansion, entrepreneurship development and technology.

Beneficiaries appreciated the think tanks of the SME policy by assenting that thematic areas highlighted are highly relevant for the policy content. Sri Lanka, Tanzania and all ASEAN member countries have SME policies that address almost same issues in their policies too. By this, it can be depicted that the core issues that SMEs face are similar in many countries.
The beneficiaries were also questioned about the achievements of intended outcomes mentioned in the Policy document with respect to SME Development Vision and thematic areas. Beneficiaries responded that intended outcomes set for SME development vision have not been achieved. SME development vision of Sri Lanka was very precise and focused on doubling the per capita income by US $ 4000 by 2016. According to official figures of (Economics, 2016) per capita income of Sri Lanka in 2016 was US $ 3759.2. This clearly demonstrates that SME development vision of Sri Lanka was almost achieved as it was set in their SME Policy. Unlike SME development vision of Sri Lanka, the SME development vision 2015 of Pakistan was no specific and non-realistic as per economic conditions of Pakistan.

The beneficiaries of SME Policy also gave their insights upon the achievements of intended outcomes for thematic areas. The findings for access to finance depicted that SME Policy has not achieved. According to SMEDA (2014-2015), SMEDA has been facilitating multiple beneficiaries through Prime Minister’s Youth Business Loan Scheme (PMYBL). As per ten-year implementation review of Policy by UNIDO (2012), SMEs in Tanzania have been facilitated from multiple loan schemes by the government. SMEs in Tanzania have also been facing issues about financial support from Banks.

Beneficiaries of SME Policy of Pakistan gave findings that there hasn’t been implementation mechanism for the Policy. However according to SME Policy of Tanzania (Trade, 2003), the programs proposed were expected to be implemented within 3-5 years’ time. When compared with SME Policy of Pakistan, there wasn’t any implementation mechanism. Beneficiaries highlighted the issue of loan for SMEs. SMEDA in its Annual Report SMEDA (2014-2015) highlighted the SMEs being facilitated with loans. The findings contradict in this regard. The preferable reason could be that yes SMEDA might be supporting SMEs in terms of
loans, but the numbers would be really low. There might be a situation that those SMEs do not reach up to Associations (Beneficiaries) and share their experiences about the loan process.

Business environment was another thematic area highlighted in the SME Policy of Pakistan. Beneficiaries gave their viewpoint that government has played its role by improving infrastructure. In 2006-2007 when SME Policy was being drafted, SMEDA had 27 projects in its pipeline. In the year 2014-2015, SMEDA had been working on 8 projects worth of Rs. 586.61 Million through Public Sector Development Program (PSDP).

SME definition in Malaysia is sector oriented. According to SMRJ (2008) there are separate definitions of Micro, Small, and Medium enterprises for manufacturing, manufacturing-related services and agro-based industry. SME policy of Pakistan clearly intended that single SME definition will be adapted by all government institutions, ministries and industries. SME sector of Pakistan is spread in manufacture sector, agriculture sector, service sector, technology sector and many more. The findings were that intended outcomes of technology up-gradation have been achieved. However, policy hasn’t achieved intended outcomes about SME curriculum and marketing. According to Annual Report SMEDA (2014-2015), government has been supportive in technology up gradation for SMEs.

Beneficiaries gave findings that there haven’t been any achievements in Entrepreneurship Development. Their perspectives were that there is lack of support from government and as per the annual report SMEDA (2014-2015), there has been huge support for SMEs in entrepreneurship. The report mentioned quite a few initiatives where SMEDA supported SMEs.

In the current study, beneficiaries of SME Policy were also questioned about the impact of SME Policy on SME sector. A number of beneficiaries felt that there hasn’t been any impact of SME Policy on SME sector and SMEs have been surviving on their own. According to
beneficiaries, there is lack of communication and awareness about SME Policy. Few responded that there isn’t any mechanism to attribute changes. Going through SME Policy of Pakistan in detail and annual reports of SMEDA, Researcher didn’t find any efforts or measures been taken to communicate the Policy. The findings of current study stand true about no mechanism to attribute changes and neither any SME or beneficiary being aware about the Policy. In Researcher point of view, there has to be strong measures taken by government and SMEDA undo this barrier.

Few beneficiaries responded that there has been positive impact of Policy. Under this, banking sector has introduced new products. State Bank of Pakistan (SBP) (2013) introduced quite a few initiatives for SMEs financing. They included Export Financing scheme, Credit Guarantee Scheme, SBP Refinancing Scheme Facility to SME. The annual report SMEDA (2014-2015) highlighted quite a few initiatives taken for technical up gradation of SMEs and Human Capital Development.

Lastly, beneficiaries of SME Policy were asked about the recommendations that they suggest for improving SME Policy. Beneficiaries of SME Policy of Pakistan recommended that training & awareness, corruption, land leasing, terrorism, economic instability and myopic mind set of SMEs also are the key issues that need to address in the Policy. SME Policy of Pakistan should draft the SME Definition following the idea of Malaysia. According to SMRJ (2008), SME Definition Malaysia is sector driven. It should be ensured that there is proper channel for communicating the Policy to beneficiaries and SMEs. For this, it’s advised that Policy is also translated in Urdu Language.

The beneficiaries also recommended that Business Environment of Pakistan should be linked with macro-economic framework of the country. It should be done keeping in preview SME Policy of Sri Lanka (Commerce, 2005). Lastly SME Policy Lacks Monitoring and Evaluation
mechanism. Therefore, it’s recommended that Policy should have strong Monitoring and Evaluation mechanism as of international SME Policies.

**Conclusion**

In preview of the analysis, findings, discussion and above stated arguments about the current study, it’s been depicted that current SME Policy of Pakistan needs quite a few changes for its improvement. It’s been concluded from current study that SME Policy of Pakistan wasn’t communicated and implemented as it should have been. The study has resulted to be a bridge between beneficiaries and SME stakeholders. The study used beneficiary’s assessment approach to evaluate the SME Policy of Pakistan. In view point of the study, future research can be carried out for evaluating the SME Policy by using different dimensions. Literature on SME Policy evaluation of multiple developing countries shows that beneficiary assessment based approach has not yet been used by any country. SME Policy: case of Pakistan could be used as a benchmark by other developing countries to evaluate their SME Polices by targeting the beneficiaries of SME Policy.

However, in preview of case of Pakistan, there were thirteen high growth sectors identified by SMEDA, Researcher was limited to interviewing nine because of time and location constraints. The study can be used as a base line to evaluate the SME Policy of Pakistan by different dimensions. Researcher in present study considered high growth sector associations as beneficiaries of the SME Policy.
References


Business, Investment and Technology Branch: UNIDO.


## Table 6: Main Nodes

<table>
<thead>
<tr>
<th>Names</th>
<th>Sources</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance of Policy Document</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Thematic Areas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highly Relevant</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Supporting HRD, Technology Up-Gradation, and Marketing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• SME Definition</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Entrepreneurship Development</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Business Environment</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Access to Finance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>SME Development Vision</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Relevant for SME Policy</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reason for No Relevance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Not Precise</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Non-realistic as per economic conditions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Intended Outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SME Development Vision</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Too Broad &amp; Vague</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Not Aligned with Economic Conditions of Pakistan</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Not Achieved Main Points of Vision</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Lack of Planning</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Thematic Areas of SME Policy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting HRD, Technology Up-Gradation, and Marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieved</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Technology Up-Gradation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Achieved</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• No SME Curriculum</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• No Promotion &amp; Marketing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• No Clarity on Technology Up-Gradation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>SME Definition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reasons for No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• SME sector is heterogeneous</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• No Single Definition</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Definition is of International Standard</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Entrepreneurship Development</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>-----------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Reasons of No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- No Role of Government</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>- Lack of Creativity</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Business Environment</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Achieved</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- Infrastructure</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Not Achieved</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- Property Rights Issues</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>- No Support from SME Help Desks</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>- No SME Act</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>- No Skilled Labor Available</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>- Issues seem to be static</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Access to Finance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reasons of No Achievements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- No Support from SME Bank</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>- No Support from Commercial Banks</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>- No Implementation Mechanism</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>- No Financial Support</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>- Hurdles in Loan</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Impact of SME Policy</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Impact on SME Sector</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Reasons of No Impact</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- No Support from SMEDA</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>- No Mechanism to Attribute Changes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Lack of Communication</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>- Lack of Awareness</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Positive Impact of Policy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>New Initiatives Taken</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- Technical Up Gradation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Human Capital Development</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Finance</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Facilitation of Public Sector Institutions</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Banking Sector Introduced New Products</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Recommendations</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Voice of SMEs should be Included</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sector Specific SME Definition</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Reserve Quota for SME Representatives</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Proper Channel of Communication for Policy</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Policy Translation in Urdu</strong></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Ownership of SME Development</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Monitoring &amp; Evaluation of Policy</strong></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>• Regulatory Body for Evaluation</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>• Monitoring &amp; Evaluation Tenure</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>• Allocate Resources for M&amp;E</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Link Business Environment with Macroeconomic Framework</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Issues to be Addressed</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Training &amp; Awareness</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>• Terrorism</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>• Myopic Mindset of SMEs</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• Land Leasing</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>• Economic Instability</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>• Corruption</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Identify Specific KPI’s</strong></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>HRD, Technology &amp; Marketing should be Addressed Separately</strong></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Check &amp; Balance of Policy</strong></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 1: Project Map of Relevance of Policy Content
Figure 2: The Project map of Intended outcomes of SME Development

Figure 3: The project map for intended outcomes of thematic areas

Figure 4: The Project Map of Intended outcome for SME Definition
Figure 5: The Project map for Access to Finance of Business Environment

Figure 6: The Project Map for Intended Outcomes of Business Environment

Figure 7: Project map for Supporting HRD, Technology Up-gradation and Marketing
Figure 8: Project map for Entrepreneurship Development

- Thematic Areas of SME Policy
  - Entrepreneurship Development
    - Achievements
      - Impact of SME Policy
        - Positive Impact of Policy
        - No Impact on SME Sector
          - Reasons of No Impact of the Policy
            - No Mechanism to attribute changes
            - Lack of Communicator
            - Lack of Awareness
          - No Support from SMEDA
          - Lack of Awareness
        - Facilitation of Public Sector Institutions
          - Non-implemented
          - Introduced New Products

Figure 9: Project map of Impact of SME Policy
Figure 10: Project map of Recommendations
SMEDA

Turn Potential into Profit
Small and Medium Enterprises Development Authority
Ministry of Industries & Production
Government of Pakistan
www.smeda.org.pk

SMEDA Head Office
6th Floor, LDA Plaza, Egerton Road, Lahore
Tel: (042) 111-111-456 Fax: (042) -36304926-7

Punjab
8th Floor, LDA Plaza, Egerton Road, Lahore.
Tel: (042) 111-111-456 Fax: (042) 36304926, 36370474

Sindh
5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi.
Tel: (021) 111-111-456 Fax: (021) 35610572

Balochistan
Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta.
Tel: (081) 2831623 - 2831702 Fax: (081) 2831922

Khyber Pakhtunkhwa
Ground Floor, State life Building,The Mall, Peshawar.
Tel: (091) 111-111-456, (091)-9213046-7 Fax: (091) 5286908