SMEs DEVELOPMENT IN PAKISTAN: BEFORE AND AFTER COVID-19 ANALYSIS

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CERTIFICATE

This is to certify that this thesis entitled: **"SMEs, Development in Pakistan: Before and After COVID-19 Analysis"**. submitted by **Mr. Muhammad Abid** is accepted in its present form by the School of Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Economics and Finance.

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I Muhammad Abid hereby state that my MPhil thesis titled "SMEs Development in Pakistan: Before and After Covid-19 Analysis" is my own work and has not been submitted previously by me for taking any degree from Pakistan Institute of Development Economics (PIDE) or anywhere else in the country/world.

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Muhammad Abid

Dedication

This dissertation is dedicated to my Family (especially to my Father) for their endless love, support, encouragement and prayers.

ACKCNOWLEDGEMENTS

All praises to ALLAH, the compassionate, the omnipotent, whose blessing and exaltation flourished my thoughts and thrive my ambitions, provided me a rich environment of learning and cooperative teachers, helping friends and honored me among those who contribute to the sacred wealth of humanity.

From the formative stage of this thesis to the final draft, I own an immense debt of gratitude to my supervisor **Dr. Farhat Mahmood** for her sound advices and careful guidance through the process. I can never repay you for all the help you have provided me and the precious time you spent making sure my thesis is always on track.

I would also like to thank all of my teachers especially **Dr. Ahsan-ul-Haq Satti, Dr. Abdul Rashid, Dr. Ahmed Faraz, Dr. Hafsa Hina, Dr. Saud Ahmed, Dr. Umar Riaz Cheema, Dr. Hassan Rasool, Dr. Shujaat** and **Mr. Khurram Elahi** for their utmost guidance. I would also like to thank my immediate boss **AAO Zaheer Ahmed Khan Niazi,** my office colleagues **Yasir Ali, Shoaib Zia, Mr. Burhan, and Sheikh Arshad Sahab** for their constant support and prayers throughout the thesis and to all my dear friends especially **Khalid Hashmi, Yasir Ali, Waqas, Haris, Umer, Afaq Ahmed, Adnan, Amna, Maryam, Ihsan, Zain and Azwar** and to my uncle **Mr. Muhammad Ali** and **Dr. Mazhar Mahmood (CEO at MM & Co.),** and specially thankful to **Dr. Junaid Shanxi** and **Dr. Hafeez** for their help and encouragement.

Thank you so much!

Muhammad Abid

ABSTRACT

The core objective of the current study is to analyze the factors affecting the development of the small and medium enterprises (SMED) both before and after Covid-19 in Pakistan. The factors considered before Covid-19 are Marketing (MKT), Technology (TEC), Finance (FIN), Managerial Skills (MS), Government Support (GOV) and Education (EDU) while the factors after Covid-19 are Marketing, Technology, Finance, Managerial Skills, Government Support, Education, Supply (SUP), Income (INC) and Online Business (ONB). Primary data of before and after Covid-19 have been collected via questionnaire and for analysis the estimation technique of Structural Equation Modeling (SEM) have been used. The findings of the study show that variables Marketing, Finance, Education and Managerial Skills have significant relationship before and after covid-19 while the variable Technology shows negatively significant relationship before Covid-19 and positively significant relationship after Covid-19. Moreover, Government Support shows negatively insignificant relationship before Covid-19 but shows positively significant relationship after Covid-19 with the development of small and medium enterprises. On the other hand, the after Covid-19 variables i.e. Income and Online Business show significant relationship but variable Supply shows insignificant relationship with the development of small and medium enterprises.

The findings of the study show that there exist three key variables that are important for both before and after Covid-19 i.e. Finance, Technology and Marketing to affect the development of SMEs of Pakistan. Out of these three variables Finance is the most important factor to start the business, to run the business and for any kind of transactions. Marketing is another important variable because for selling new products it is very compulsory to provide details of goods and services to most of the people in the area so that they can purchase those products. The third most important factor is Technology. Use of technology can bring an increase in output in short time. As, in Covid-19 by using technology most of the SMEs continue their businesses but those who didn't use technology because of no knowhow suffered from huge losses. So, technology is also one of the most important factor for the development of the small and medium enterprises.

Keywords: SMED, Online Business, Before and After Covid-19, Structural Equation Modeling.

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LIST OF ABBREVIATIONS

SMEs	Small and Medium Enterprises
SMED	Development of Small and Medium Enterprises
MKT	Marketing
TEC	Technology
FIN	Finance
MS	Management Skills
GOV	Government Support
EDU	Education
SUP	Supply
INC	Income
ONB	Online Businesses
SEM	Structural Equation Modeling
SMEDA	Small and Medium Enterprises Development Authority
GDP	Gross Domestic Product
SBFC	Small Business Finance Corporation
UNCTAD	United Nations Conference on Trade and Development
ICSTSI	Islamabad Chamber of Small Traders & Small Industries
MSMEs	Micro, Small and Medium Enterprises
GSPN	Global SME Policy Network
CFA	Common Factor Analysis
AVE	Average of Variable Extracted
CR	Composite Reliability

CHAPTER 1

1. INTRODUCTION

1.1.Background of the Study

The Small and Medium Enterprises (SMEs)[1] are recognized as strength of the economy because of their contribution in the creation of jobs, increase in foreign exchange, reduction in poverty, and enhancing exports (Noreen & Junaid, 2015). SMEs provide job opportunities to millions of disadvantaged groups[2], and helping to develop skills levels for low and unskilled workers. Globally the development of SMEs is crucial due to their significant contribution in the GDP e.g. in Malaysia the contribution of SMEs in GDP was 38.2%, in India it is 37.54%, in Pakistan it is 40%, in China its 60% during 2020 (Textor, 2021). Because of innovation and use of new technology the business competition increases that also increases the performance of SMEs which is beneficial for the economy of any country.

SMEs of Pakistan are still facing many issues e.g., insufficient financial resources, difficulties to get loans from financial institutions, incompetent workers, cash flow shortage and raw material shortage, lack of government support (Saqlain Raza, 2018; Tribune 2021). Due to these issues as identified in literature many SMEs are not able to convert their self to

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1. According to Federal Bureau of Statistics the enterprises whose numbers of employees are less than 10 are known as small enterprises (Dar, Ahmed & Raziq, 2017).

1a. There are so many definitions of SMEs in Pakistan every institution did its own definition but here this study has taken the definition of State Bank of Pakistan for data collection purpose, the definition is; No. of employees up to 50 (For Small Enterprises), No. of employees: 51-250 for Manufacturing / Services, No. of employees: 51-100 for Trading, and Annual flow more than PKR 150 Million and till 800 Million (For Medium Enterprises).

2. Ethnic minorities, migrants, individuals with disabilities, solitary elderly people, and children are among those who face Poverty, social isolation, discrimination, and violence are all more prevalent than among the overall population. (https://eige.europa.eu>thesaurus>terms).

medium and large size enterprises, even some are moving towards shut down condition. Therefore, for a developing country like Pakistan, it is very essential for the betterment of the economy that government must focus on the development of SMEs because if business flourish in the Pakistan; only then the economy will flourish (Sherazi et al., 2013).

A government organization named as small and medium enterprises development authority (SMEDA)[2] is working for the improvement of the SMEs in Pakistan from 24 years. But the issue is that most of the SMEs are not registered with government agencies due to which they can't avail any support from SMEDA. Although the government organization SMEDA is working from several years but its progress towards SME's development has been limited (Abrar-Ul-Haq et al., 2015).

SMEs in Pakistan have the potential to boost the economy since they can efficiently employ limited resources and produce internationally acceptable products, resulting in foreign exchange gains (Jamali et al., 2010). The SMEDA has already been functioning in Pakistan to help this sector, but it has mostly focused on higher bracket enterprises (as defined by revenue and workforce), whereas the majority of Pakistani SMEs fall into the lower bracket (Kureshi et al., 2010). SMEDA and SBFC[4] are assisting SMEs in Pakistan in obtaining loans; however insufficient government regulations and weak taxation procedures have hampered success (Shah Alam et al., 2011).

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3. Small and Medium Enterprises Development Authority is a government of Pakistan autonomous organization under the Ministry of Industries and Production. SMEDA was founded in October 1998 with the goal of promoting and enabling the development and expansion of small and medium-sized businesses in the country..

4. The Small Business Finance Corporation (SBFC), formerly known as the People's Finance Corporation (PFC), was founded in 1972 to help people with limited financial resources. The Corporation offers interest-free loans to all types of small businesses owned or sponsored by people or businesses. (https://islamicmarkets.com/education/specialised-financial-institutions-pakistan).

The global outbreak of the Covid-19 issue, has a major impact in terms of investments, trade, and tourism on health & economy(Gössling et al., 2020). As an outcome the use of social distancing, people are hesitant to engage in restrictive outdoor activities. This has ramifications in a number of businesses. Large and small businesses both play a role in driving economic growth. Businesses, on the other hand, have become unstable since the Covid-19 crisis because they are heavily dependent on the speed with which money flows in from sales. As a result, the company's cash flow has been impacted by lower consumer demand (Priyono et al., 2020).

After Covid-19 social distancing and limited traveling restrictions imposed by the governments of almost all countries. As a result, a wide range of businesses have been disrupted, including retail malls, restaurants, and markets (Chetty et al., 2020). Consumers from all over the world have modified their buying patterns and met their wants by shopping online. (Bartik et al., 2020a; Bartik et al., 2020b).Restaurants, supermarkets, gyms, regional food markets, theatres, and car dealerships are just a few examples of physical space-dependent companies (Chetty et al., 2020). The scenario is completely different for internet markets. In times of crisis, such as the Covid-19 lockdowns, technology is the best way to ensure organizational viability (Fletcher & Griffiths, 2020).Some businesses, particularly small businesses, lack the requisite digital skills to conduct business online, thus they must learn more about how to use online business tools (Antonescu, 2020). Consumers, on the other hand, were able to carry on with their lives because to digital technologies like Google Cloud, Microsoft Azure, Web services, and Amazon, as well as applications like Netflix, Slack, and Zoom (Javed & Ayaz, 2020). Similarly, during the Covid-19 lockdowns, Facebook and Amazon revealed lower ad income forecasts (Fernandes, 2020).

Scaling up and maintaining the operations of entrepreneurial projects are difficult. There aren't many choices for changing traditional company strategies to digital ones. Due to a lack

of resources and capacity caused by the epidemic, it has become considerably more challenging for business owners to consider modifications to the current structure. According to the World Bank, the COVID-19 recession will be the worst since WWII, and it will create more hurdles for SMEs in all sectors (Bank, 2020).

1.2.Motivation of the Study:

From the past many years, the SMEs in Pakistan were facing several issues and not getting any significant support from the government. After Covid-19 occurrence the situation of the small and medium enterprises (SMEs) got worse (Cusmano & Raes, 2020). Many studies (e.g. (Aftab et al., 2021; Burhan et al., 2021; Cepel et al., 2020; H. M. Le et al., 2020; Qamruzzaman, 2020; Shafi et al., 2020; Shah et al., 2020; Wahyono et al., 2021), etc.) conducted on after covid-19 that examined few factor's (blockage in transportation, Fall in demand, cordial relationships with stakeholders, government backing) impact on SME's development but none of these studies did the comparison of the main factors (Technology, Marketing, Managerial Skills) that are affecting the development of SMEs before[3] Covid-19 and after Covid-19, whether factors are same after Covid-19 that affecting the development of the small and medium enterprises or there are some new factors occurs and what is the impact of each factor on the development of SMEs before Covid-19 and after Covid-19. So, this study has focused on the comparison of the factors that whether same factors affecting the SME's development before and after Covid-19 or some other factors also occurs that affecting the growth of the SMEs after Covid-19.

[3] The period of before Covid-19 is from 2015 to 2019 (Before the occurrence of Covid-19)
The period of after Covid-19 is from 1st wave of the Covid-19 to the 4th wave of Covid-19.

1.3.Scope of the Study:

This study aims to focus on the factors that are affecting the development of SMEs before and after Covid-19. The study of factors that affecting the development of SMEs before and after Covid-19 is beneficial for the owners of the SMEs and will deliver useful insights to the policy makers that which factors they have to focus more after Covid-19 and which factors they have to focus less.

1.4.Significance of the Study:

The occurrence of COVID-19 significantly affected the economy of Pakistan just like other economies of the world. In particular, businesses are facing various problems such as decline in demand, lack of raw materials, closure of export orders, disturbance in supply chain and transportation (Shafi et al., 2020). All around the world the businesses are facing the biggest effect of the COVID-19 occurrence on their businesses but mainly COVID-19 effects the SMEs because SMEs compared with large businesses do not have enough resources, mainly administrative and financial (Shafi et al., 2020) and so unprepared for such long-term disruptions (Prasad et al., 2015); (Bartik et al., 2020b). As a result, many SMEs are depleted, some do not continue to function, and some soon ran out of stock.

This study has examined the factors {(Marketing, Technology, Finance, Managerial Skills, Government Support, and Education) for before Covid-19 and (Marketing, Technology, Finance, Managerial Skills, Government Support, Education, Income, Supply and Online Business) for after Covid-19.Because these are the most relevant indicators for the measurement of SME's performance}, that affected the SMEs development before and after Covid-19 in Pakistan. The results of the study will facilitate policy makers to build positive environment by formulating policies that will increase the development of SMEs in

Pakistan. This research will also assist SME owners in understanding the elements that affect their firm's development after Covid-19 so they can take positive steps for the improvement.

Moreover, the development of the SMEs is very important to flourish the economy of Pakistan but SMEs are not getting any significant support from the government.

1.5.Problem Statement:

In Pakistan, SMEs are key to the economy because they make up more than 90% of the estimated 0.0032 billion business operations add 40% into the GDP and more than 25% of earnings from the exports (Shah & Syed, 2018). These enterprises reach everywhere in the Pakistan in urban and rural areas, characterized an important part of agriculture, manufacturing, trade, commerce, retail, and services sectors. Due to lockdown because of Covid-19, Pakistani businesses are facing negative effects that have never been seen in their businesses. As per the report of the United Nations Conference on Trade and Development (UNCTAD) (Programme, 2020), Pakistan will be heavily affected through the COVID-19. So, this highlights the necessity to assess the effect of the COVID-19 occurrence on SMEs development in Pakistan.

1.6.Research Gap:

There are different studies (e.g. (Aftab et al., 2021; Ali Qalati et al., 2020; Shafi et al., 2020)) that checked the shock of Covid-19 on the development of Pakistan's SMEs. Different statistical techniques were used by various studies. Few of them only used descriptive statistics (Aftab et al., 2021; Javed & Ayaz, 2020; Seth & Seth, 2020; Shafi et al., 2020) and few of them used other statistical techniques like Simple Regression, Correlation, etc.(Karim et al., 2021) and(Ali Qalati et al., 2020). Furthermore, in the report of SMEDA "Impact of Covid-19 on SMEs" in April, (2020) by (Seth et.al, 2020) they also checked the impact of

Covid-19 on SME's development by focusing on only two factors one is employment and other is production. This study is different from other studies, from SMEDA survey report and from the study of (Abrar-Ul-Haq et al., 2015) are:

1. More Factors analysis
2. Analysis of before and after Covid-19.
3. Difference in estimation technique

1.7.Objective:

The goal of this research is to explore the major factors that affecting the development of Pakistani SMEs both before and after Covid-19 by using primary data.

1.8.Research Question:

What are the effects of Covid-19 on the development of SMEs in Pakistan, whether the development of SMEs affected by the same factors before and after Covid-19 or not?

1.9.Organization Of The Study:

This research has been structured as follows; Chapter 1 provided brief introduction about SMEs. In addition, background of the study, motivation of the study, scope of the study, significance of the study, problem statement, research gap, objective of the study and research question is also the part of this chapter. Chapter 2 provided literature review of national and international studies related key variables influencing the growth of SMEs in Pakistan. It discussed about different studies that focused on the development of SMEs before and after Covid-19. Detailed theoretical framework is the part of chapter 3 that established the link of development of SMEs to the other factors. In addition, the conceptual framework and data description has also discussed in this chapter. In Chapter 4 the study observed the

factors that affecting the development of SMEs by using Primary Data and PLS-SEM statistical software. It also focused on the recent econometric techniques and procedure. In Chapter 5 the study provided conclusion, recommendations and policy implications on results of the study.

CHAPTER 2

2. LITERARURE REVIEW

2.1.Introduction

This chapter is based on two sections. Section 1 is Empirical Literature Review and section 2 is Theoretical Literature. In the empirical literature review the empirical review of different related studies has been done and in theoretical literature different theories related to the topic (SMEs Development in Pakistan; before and after Covid-19 analysis) of this study has been discussed. In last a concluding paragraph is also a part of this chapter.

2.2.Empirical Literature

An empirical literature review is also known as a systematic literature review, in which analyzes of previous empirical studies has been done. It helps a researcher to design a research method as compared to others who did related studies. This study also empirically reviewed many related studies in order to explore the major factors that affecting the development of Pakistani SMEs both before and after Covid-19.

2.2.1. Importance of Marketing for Development of SMEs:

The impact of Marketing on the development of the small and medium enterprises had been investigated by different studies (Abrar-ul-haq et al., 2015; Bouazza et al., 2015; Indarti and Langenberg, 2004; Noreen and Junaid, 2015; Nkwabi and Mboya, 2019). Out of these studies only two studies (Nkwabi and Mboya, 2019; Bouazza et al., 2015) had found negatively significant relationship with the development of the small and medium enterprises. Due to the fact that the majority of SMEs in Algeria are owned and run by a single individual, they lack marketing expertise and are poor when it comes to conducting market

research. Such business owners handle all managerial tasks and don't have the time or resources to do market research or analyse consumer trends (Bouazza et al., 2015). Out of the reviewed studies these studies (Abrar-ul-haq et al., 2015; Indarti and Langenberg, 2004; Noreen and Junaid, 2015) found positively significant relationship with the development of the small and medium enterprises. The collective entry of new entities substantially altered the marketing infrastructure, affecting suppliers, customers, distributors, and Small and Medium Enterprises who are unsure how to handle the situation. (Noreen and Junaid, 2015). There is a lack of attention of owners of the SMEs towards marketing strategy (Indarti and Langenberg, 2004). Pakistani SMEs do not put much emphasis on promoting their goods or services, although marketing has an impact on business growth in the current competitive environment (Abrar-ul-Haq et al., 2015).

2.2.2. Importance of Technology for Development of SMEs:

The impact of Technology on the development of the small and medium enterprises had been investigated by different studies (Abrar-ul-Haq et al., 2015; Ali Qatali et al., 2020; Amaradiwakara and Gunatilake, 2016; Bouazza, Ardjouman and Abada, 2015; Consoli, 2012; Faisol, Astuti and Winarko, 2021; Indarti and Langenberg, 2004; Kumar and Ayedee, 2021; Moorthy et al., 2012; Noreen and Junaid, 2015; Rodrigues, 2021; Sherazi et al., 2013) Out of the above mentioned studies (Abrar-ul-Haq et al., 2015) found insignificant relationship of technology with the development of the small and medium enterprises. Because, Pakistan is not a technology oriented country. Due to electrical issues and the lack of complex manufacturing processes, there is a lack of technological adoption (Abrar-ul-Haq et al., 2015). Other studies (Ali Qatali et al., 2020; Amaradiwakara and Gunatilake, 2016; Bouazza, Ardjouman and Abada, 2015; Consoli, 2012; Faisol, Astuti and Winarko, 2021; Indarti and Langenberg, 2004; Kumar and Ayedee, 2021; Moorthy et al., 2012; Noreen and

Junaid, 2015; Rodrigues, 2021; Sherazi et al., 2013) found a significant relationship of Technology with the development of the small and medium enterprises. Technology is important to sustain a business in the long run. If a business creates innovative goods in a well- timed manner, existing customers will have trust in the business and more customers will be interested to the business (Amaradiwakara and Gunatilake, 2016). Aligning ICT investments with internal talents and organizational procedures is crucial for the greatest performances (Consoli, 2012). For sustainable SMEs, technology is a driver of intellectual capital. The technology used could be tied to the SME's current equipment, and important digital competencies can be utilized in company activities like customer communication channels (Faisol, Astuti and Winarko, 2021). If small and medium-sized businesses do not invest in the IT industry, they will not be able to compete with others and will not be able to develop their core competencies. When small and medium-sized businesses combine their IT skills with their core expertise, they can outperform their rivals (Noreen and Junaid, 2015). The current dynamic and unstable manufacturing environment has compelled SMEs to adapt their conventional business practices in order to compete globally. Pakistan's SMEs industry relies on outdated and subpar technology. There are many important aspects that contribute to a small business's sustainable development, but the role of sophisticated manufacturing technologies in the sector's growth is important. To gain their fair portion of the market on both the local and international levels, SMEs might adapt their long-established production methods because of the advancements in manufacturing processes (Sherazi et al., 2013). It is essential that these businesses (SMEs) make the switch to digitalization, information technology, and dynamic competencies to prevent the same type of economic and social upheaval from crises (Rodrigues, 2021). The owners of the SMEs should pay more consideration to advance technology because use of outdated technology is also a hindrance in the growth of SMEs. The SMEs should respond to the rapid changes in technology by

implementing new processes and growth strategies in order to discover alternative ways to maintain their competitive advantage. Technology might be significant in this regard. In this context, technology and the enhancement of the industrial process are closely related. Because, lack of equipment and outdated technology are among hindrances of the SMEs development (Indarti and Langenberg, 2004). Due to the scarcity of local patents and the difficulty in obtaining them for SMEs, Algerian SMEs frequently purchase international technology licenses. Only a tiny percentage of SMEs in Algeria (about 13.3 percent) have purchased technology licenses from international businesses; the situation is the same for large businesses and is considerably worse in other SMEs that were examined. This phenomenon may be explained by the modest scale of SME businesses and their thin financial foundation, which prevents them from investing in R&D or affording pricey new technologies. Additionally, a lot of SMEs in Algeria operate utilizing antiquated or inadequate technology and a traditional management style. As a result, there is low productivity, poor product quality, and a minimal local market share (Bouazza, Ardjouman and Abada, 2015). Another important problem that has impeded the growth and expansion of SMEs is the lack of access to new technology. But having access to money is closely related to having access to new technology (Amaradiwakara and Gunatilake, 2016). During COVID-19, the deployment of technology by SMEs might assist them in resolving their issues. E-commerce, social networking, and a number of other technical platforms can be used effectively to make this happen (Kumar and Ayedee, 2021). By using IT, a company will be able to communicate with customers, suppliers, and other business partners to facilitate transactions and save information. As a result, it will result in higher performance in cutting overall operating costs (Moorthy et al., 2012). But, the SMEs were not prepared for this pandemic that is why those who didn't adopt digitalization get affected (Ali Qatali et al., 2020).

2.2.3. Importance of Finance for Development of SMEs:

The impact of Finance on the development of the small and medium enterprises had been investigated by different studies (Abdulsaleh and Worthington, 2013; Abrar-ul-Haq et al., 2015; Cepel et al., 2020; Chaudary, 2005; Chittithaworn et al., 2011; Govori, 2013; Ma, liu and Gao, 2021; Nkwabi and Mboya, 2019; Philip, 2011; Sherazi et al., 2013; Shafi, Liu and Ren, 2020; Warsame, 2020). Out of these studies two studies (Chaudary, 2005; Chittithaworn et al., 2011) found negatively significant relationship with the development of the small and medium enterprises. The elements determining SMEs' commercial success are crucial for comprehending business continuity and growth, which supports a nation's economic progress (Chittithaworn et al., 2011). Because of high tax and tight policies most of the SMEs having lack of finance (Chaudary, 2005). Remaining studies (Abdulsaleh and Worthington, 2013; Abrar-ul-Haq et al., 2015; Cepel et al., 2020; Govori, 2013; Ma, liu and Gao, 2021; Nkwabi and Mboya, 2019; Philip, 2011; Sherazi et al., 2013; Shafi, Liu and Ren, 2020; Warsame, 2020) found significantly positive relationship with the development of the small and medium enterprises. Large size firms are main factor of creating financial issue for SMEs (Abdulsaleh and Worthington, 2013). The financial lending system in Pakistan only benefits large enterprises to a great extent. The SME sector is completely ignored. According to SMEDA, SME sector only receives 19% of the total financial credit system in Pakistan, while major corporate companies account for 54% of the system. It is also true that SME business owners prefer to use their own or family savings for their companies rather than borrowing money from banks because the opportunity cost of doing so is far lower than that of borrowing money from a financial institution. However, the SME sector in Pakistan still faces significant challenges due to a lack of finance from the formal sector (Sherazi et al., 2013). Due to lockdown most of the SMEs were facing financial distress (Warsame, 2020; Shafi, Liu and Ren, 2020). The majority of SMEs in Pakistan is content with their modest

income and is unlikely to grow their businesses due to the limited availability of financial capital (Abrar-ul-Haq et al., 2015). Lack of financial assistance by the micro-finance institutions creates financial issues for the SMEs (Nkwabi and Mboya, 2019). Due to bribery activities, dealing with legal issues has frequently compelled SMEs to invest substantial amounts of money. To assure future corporate success, the legal component is frequently used in decision-making about selection and operation (Philip, 2011). Setting up a favorable environment for the development of SMEs requires facilitating access to funding (Govori, 2013). Government policy related financial help of the SMEs makes the situation little better but more attention required (Ma, Liu and Gao, 2021).

2.2.4. Importance of Managerial Skills for Development of SMEs:

The impact of Managerial Skills on the development of the small and medium enterprises had been investigated by different studies (Abrar-ul-Haq et al., 2015; Bouazza, Ardjouman and Abada, 2015; Chaudary, 2015; Lotfi, Nayebzadeh and Dehnavi, 2014; Nasar et al., 2021; Noreen and Junaid, 2015; Philip, 2011; Sherazi et al., 2013; Ya Shah et al., 2020). Out of the above mentioned studies only one study (Chaudary, 2015) found negatively significant relationship of Managerial Skills with the development of the small and medium enterprises. Most Pakistani SMEs have not put much attention towards bringing quality management practices in their businesses because of their reserve limitations (Chaudary, 2015). Other studies (Abrar-ul-Haq et al., 2015; Bouazza, Ardjouman and Abada, 2015; Lotfi, Nayebzadeh and Dehnavi, 2014; Nasar et al., 2021; Noreen and Junaid, 2015; Philip, 2011; Sherazi et al., 2013; Ya Shah et al., 2020) found positively significant relationship of Managerial Skills with the development of the small and medium enterprises. Managers of SMEs are urged to establish appropriate organizational structures, mostly based on adhocracy, and to take into account the external environment, the state of the industry, as well as their own internal

capabilities. Additionally, they are counseled to use strategic management tools like SWOT[4] analysis to adopt the optimum plan while taking economic and competitive factors into account (Lotfi, Nayebzadeh and Dehnavi, 2014). Small business owners and managers who receive training are better equipped to assure the sustainability and prosperity of their companies (Bouazza, Ardjouman and Abada, 2015). Absence of technology in managerial skills affects the performance of the Small and Medium Enterprises (Noreen and Junaid, 2015). Lockdowns caused a substantial drop in customer turn-around, and SMEs were unable to control their operating costs as a result of individuals staying at home (Nasar et al., 2021). Businesses had no plans to address the economic problems caused by the pandemic (Ya Shah et al., 2020). Furthermore, the financial barrier, such as the difficulty to obtain financing from the official financial sector, increases significantly the management challenges for small enterprises (Sherazi et al., 2013).

2.2.5. Importance of Government Support for Development of SMEs:

The impact of Government Support on the development of the small and medium enterprises had been investigated by different studies (Ali Qalati et al., 2021; Aladejebi, 2020; Abrar-ul-Haq et al., 2015; Burhan, 2021; Gao, 2021; Huyen Le et al., 2020; Indarti and Langenberg, 2004; Lotfi, Nayebzadeh and Dehnavi, 2014; Ma, Liu and Maseko et al., 2011; Nurunnabi, 2020; Qamruzzaman, 2020; Rodrigues, 2021). All above mentioned studies found significant relationship of Government Support with the development of the small and medium enterprises. But, the literature shows two different faces one is related to the positivity and vice versa. The positive side of literature said that the government has made substantial efforts and implemented a stimulus package to maintain stable employment for

[4] SWOT Analysis: An investigation carried out by a company to determine its internal strengths and flaws and to identify its external threats and opportunities.

small and medium-sized businesses (Nurunnabi, 2020). The growth and development of SMEs are positively impacted by appropriate government policies (Lotfi, Nayebzadeh and Dehnavi, 2014). The policies of the government and stakeholders have an influence on the existence and development of SMEs (Huyen Le et al., 2020). Support from the government is defined as rules and policies that encourage the growth of SMEs. The growth of SMEs would also be aided by a variety of government programs that support in obtaining financing and implementing new technology (Abrar-ul-Haq et al., 2015). Government initiatives greatly lessen the pandemic's adverse effects on SMEs. Early in the pandemic, the Chinese government moved swiftly to make strategic deployments to give monetary, material, and human support for pandemic detection and control. In this manner, the pandemic's expansion in China was most effectively contained (Ma, Liu and Gao, 2021). The other side of the literature said that the government support provided to SMEs is insufficient to enable them to grow into competitive firms on a global scale. Government assistance is needed by SMEs not only financially but also in the areas of research, quality control, marketing, financial management and technology (Maseko et al., 2011). Government support is of compulsory condition to foster SMEs development. As lack of institutional support is a hindrance in SMEs development (Indarti and Langenberg, 2004). The government didn't provide the sufficient help to SMEs which mainly affect the growth of SMEs (Ali Qalati et al., 2021). Government assistance has been cited as a deciding factor that affects choices for operational actions. Additionally, insufficient tax cut and subsidy in the form of reduced utility costs were insufficient to secure business survival, requiring them to finance investments with their own funds or by borrowing money (Burhan, 2021). Most of the SMEs were not inclined to modify how their business operates as a result of the Pandemic, and most of them disapproved with the government's lockdown and restriction actions. Additionally, they largely concurred that the government was not taking sufficient measures to stop

the Covid-19 pandemic (Aladejebi, 2020). Due to their informal nature, despite their significant contribution to the nation's economy and employment generation, small businesses can go unnoticed by policymakers and may not receive the support they require (Qamruzzaman, 2020). Furthermore, one of the studies analyzed that the managers and owners of SMEs are obviously worried about receiving government assistance; specifically, they aim for increased financial assistance, tax reductions, financial assistance to continue operations, assistance with partner layoffs, and assistance to keep their jobs. Some of these steps have already been enacted by the government, but due to the qualifying requirements and the delay in responses from the pertinent institutions, these SME managers and owners have become rather complacent (Rodrigues, 2021).

2.2.6. Importance of Education for Development of SMEs:

The impact of Education on the development of the small and medium enterprises had been investigated by different studies (Abrar-ul-Haq et al., 2015; Amaradiwakara and Gunatilake, 2016; Noreen and Junaid, 2015; Nkwabi and Mboya, 2019; Sherazi et al., 2013). All above mentioned studies found the positively significant relationship of Education with the development of the small and medium enterprises. Despite the fact that the majority of SMEs' owners have little formal education, it is considered the formal education has a big impact on growing a business (Abrar-ul-Haq et al., 2015). Formal education increases the skill level of labor that has significant influence on the growth of business and value of production as well (Noreen and Junaid, 2015). The absence of business training provided by government institutions and the owners' way of thinking are factors that have limited the expansion of SMEs (Nkwabi and Mboya, 2019). There are significant variations between SMEs with high and low growth in terms of senior manager education (Sherazi et al., 2013).

Businesses with educated owner-managers seem to be more likely to expand, probably because they are familiar with the tactics (Amaradiwakara and Gunatilake, 2016).

2.2.7. Importance of Income for Development of SMEs:

The impact of Income on the development of the small and medium enterprises had been investigated by different studies (Aftab, Naveed and Hanif, 2020; Aladejebi, 2020; Beraha and Duricin, 2020; Robinson and Kengatharan, 2020; Shafi, Liu and Ren, 2020; Sonobe et al., 2021; Warsame, 2020; Yi Lu et al., 2020). All above mentioned studies found significant relationship of income with the development of the small and medium enterprises. The biggest percentage of businesses experiencing a cash problem is due to the Covid-19 outbreak (Sonobe et al., 2021). Because SMEs were still responsible for paying their ongoing fixed expenditures, including rent, social security, employee salaries, principal and interest on loans, fees for logistics and storage, and refunds of advance receipts. All of these expenses widened their funding gaps and worsened their cash flow (Yi Lu et al., 2020). The businesses were unprepared to handle the shock of COVID-19 and were therefore susceptible. Additionally, the majority of firms cannot endure a prolonged lockdown (Aftab, Naveed and Hanif, 2020). Due to lockdown sales decreases which create different issues like loan repayment, payment of salaries, and rent which badly affect the income (Aladejebi, 2020). Concerns regarding unpaid receivables and a lack of cash flow to pay for operating expenses were raised by the surveyed businesses (Beraha and Duricin, 2020). In terms of a profit reduction, the evaluated businesses predict that the Covid-19 epidemic will cause a profit decline of more than 60% in 2020 (Shafi, Liu and Ren, 2020). The SMEs are in a precarious financial situation and are up against a number of obstacles, including a lack of supplies, a decline in both domestic and international demand for their goods and services, challenges in repaying loans and interest, an urgent need for money (including issues with wages and

utility bills), restrictions on calling back employees from leave, and a lack of new orders. Surprisingly, some SMEs are considering temporarily ceasing operations (Robinson and Kengatharan, 2020). SMEs failed to cover the operating expenses because of financial distress and insolvency due to this some of the SMEs decided to go for temporary shutdown and remaining preferred to go for permanent shutdown (Warsame, 2020).

2.2.8. Importance of Supply for Development of SMEs:

The impact of Supply on the development of the small and medium enterprises had been investigated by different studies (Aftab, Naveed and Hanif, 2020; Baral, Singh and Kazancoglu, 2021; Beraha and Duricin, 2020; Dai et al., 2020; Lotfi, Nayebzadeh and Dehnavi, 2014; Lu et al., 2020; Robinson and Kengatharan, 2020; Shafi, Liu and Ren, 2020; Warsame, 2020). One of the above mentioned studies (Lu et al., 2020) found the insignificant relationship of supply with the development of the small and medium enterprises. SMEs in China had sufficient stock which was enough for few months' transactions. So, supply did not affect the development of the small and medium enterprises that much in the short term (Lu et al., 2020). Other reviewed studies (Aftab, Naveed and Hanif, 2020; Baral, Singh and Kazancoglu, 2021; Beraha and Duricin, 2020; Dai et al., 2020; Lotfi, Nayebzadeh and Dehnavi, 2014; Robinson and Kengatharan, 2020; Shafi, Liu and Ren, 2020; Warsame, 2020) found significant relationship of supply with the development of the small and medium enterprises. The initial corona virus pandemic badly harmed the global economy, interrupted supply lines around the world, and raised the possibility of an economic recession (Warsame, 2020). It has been noted that many apparel industries shut down, leading to employment losses and job layoffs as a result of poor worldwide demand and raw material shortages (The World Bank, 2020). Following the outbreak, SME functions have been scaled back. SMEs experienced supply shortages as a result of supply chain breakdowns (Aftab, Naveed and

Hanif, 2020). Due to lockdown the lack of funds is also the main issue for supply purpose (Beraha and Duricin, 2020). Due to the lockdown policy, SMEs were mostly affected by supply-side shocks in the near term. However, in the long run, diminishing demand, particularly in the home services industries, will be the biggest challenge for SMEs (Dai et al., 2020). The construction of long-term contractual arrangements, collaboration with dependable suppliers and utilization of multiple suppliers are all recommended for SMEs in order to maximize their performance in light of the influence of supply structure on the development and expansion of SMEs (Lotfi, Nayebzadeh and Dehnavi, 2014). Cognitive preparations are ongoing assessment of the environment and a high level of alertness to disruptions through information filtering. This will give businesses the ability to identify the weak links in their supply chains and take quick measures to fix those gaps, increasing their resilience (Shafi, Liu and Ren, 2020).

2.2.9. Importance of Online Business for Development of SMEs:

The impact of Online Business on the development of the small and medium enterprises had been investigated by different studies (Islam et al., 2021; Naab and Akutey, 2021; Priyono, Moin and Putri, 2020; Sonobe et al., 2021; Winarsih, Indriastuti and Fuad, 2021). All of the above mentioned studies found the significant relationship of Online Business with the development of the small and medium enterprises. There was little or no plan for incorporating the internet into the operations of the majority of SMEs because they were founded in the traditional framework of business operations. The epidemic has, however, caused them to focus on gaining some virtual momentum for their enterprises in order to take advantage of the advantages it provides, like ongoing sales and greater visibility (Naab and Akutey, 2021). Small and medium-sized businesses (SMEs) that operate in the creative industries can undergo a digital transformation in a variety of ways, including gradually and

at various levels of change. The impact of adopting digital transformation has increased the firms' agility, which has led to a more flexible allocation of resources, according to all survey participants. However, it is believed that this agile deployment will be expensive and that the firms' survival is in trouble if it isn't efficient. A company's personalized digital transformation path must be designed by taking into account "what approach" to apply and "where it should be adopted" because there is no "one size fits all" option. The firm's current digital capabilities, learning culture, history of adoption of digital technology, and ability to collaborate with supporting parties are only a few of the variables that affect the strategy choice and the success of digital transformation (Priyono, Moin and Putri, 2020). Online business can result sustainability in their business that can take place now and in the future (Winarsih, Indriastuti and Fuad, 2021). Government regulations, financial incentives, training programmes, IT classes, and the adoption of remote working techniques in SMEs all have positive long-term effects in addition to helping during the COVID-19 pandemic (Islam et al., 2021). An innovative method of marketing is online sales. The usage of this marketing strategy, like the use of a new technology, may reduce the need for labor, but it may also result in the creation of jobs due to its effect on sales growth (Sonobe et al., 2021).

2.3.Theoretical Literature

The theoretical literature facilitates the understanding of concepts by validating and challenging theoretical assumptions. It also helps the researchers to generalize the various aspects of an observed phenomenon and provide in-depth understanding and knowledge of their field.

2.3.1. Prospect Theory

According to the prospect theory, investors consider gains and losses differently, giving perceived gains a greater weight than perceived losses. When given two options that are equal, an investor will pick the one with the highest prospective gains. The loss-aversion theory is another name for prospect theory.

Prospect theory is focused on making choices in the presence of uncertainty (Tversky and Khneman, 1986). Because of this, it can be applied to circumstances like pandemics. The way a situation is presented affects the choices actors make. Positive language is preferable to negative language because the latter will encourage riskier decisions (Craighead, and Ketchen, Darby, 2020). Media coverage of Covid-19 news that is sensational or provocative raises risks and potential negative effects. Nevertheless, the media downplays potential threats in some nations. (Radu, 2020). How a management will respond in a pandemic situation can be predicted using prospect theory.

2.3.2. Game Theory

We can better understand strategic decision-making by studying the game theory. It is an important methodology for economics, and it also provides insights into the pricing and management tactics employed by a company.

Games theory seeks to foretell how actors will behave when interacting with one another by formulating a set of rules (Von Neumann and Morgestern, 1944). According to game theory, decisions are always made out of self-interest. However, when actors encounter repeatedly, they start to work together since they are aware that their selfish behavior will eventually result in backlash (Bo, 2005). Technology adoption has been studied using games theory (Zhu and Weyant, 2003), judgments regarding distribution channels (Xia, Xiao, and Zhnag, 2017) and manufacture quantities and ideal pricing (Cao and Fang, 2013). According to game theory's presumptions, businesses with competitive goals are more likely to work together during a pandemic because of the high cost of defecting (Craighead Ketchen and Darby, 2020).

2.3.3. Theory of the Growth of the Firm

The theory of the growth of the firm (Edith Penrose, 1959) the exploitation of possibilities afforded by such resources may be completely unrelated to the size of the firm, and economies of growth depend on the specific collection of productive capital that the individual firm possesses.

The Theory of the Growth of the Firm, written by Edith Penrose in 1959, outlined some guiding principles for how fast businesses might expand successfully. She asserted that businesses are a collection of internal and external resources that support growth and the realization of a competitive advantage. According to Penrose, firm growth is influenced by the efficient and creative management resources present within the firm, while firm size is coincidental to the growth process. She continued by saying that the presence of top management and technical talent acts as a catalyst for a company's expansion. Penrose has further argued that disregard for these elements leads to failure and a loss of competitive advantage.

2.4.Conclusion of the Chapter

In the last of this chapter it is concluded that different studies had been done on SMEs development after the occurrence of Covid-19 but no study provide the comparison of before and after Covid-19 situation. That what were the factors that affects the development of SMEs before Covid-19, whether same are affecting after Covid-19 or some new factors arises and as far as the base study (Abrar-ul-Haq et al., 2015) is concern, this study done more factor analysis as compare to the base study not only this but also used the different estimation technique (SEM). Furthermore, it is concluded that all the research studies on the development of SMEs (After Covid-19) including this study is not only useful in the scenario of Covid-19. But, if unfortunately in future we face any pandemic similar to Covid-19 this study will be helpful in that situation both for the policy makers as well as for the owner of the SMEs.

CHAPTER 3

3. DATA AND METHODOLOGY

3.1.INTRODUCTION

In this chapter, the study discusses the theoretical framework of the model, data description and the econometric technique that has been used to find out the development of SMEs in Pakistan before & after the Covid-19. The study collected the data via Convenience Sampling Technique[3] from face to face interviews and also by online questionnaire (made on Google forms) with around sample of 400[6] respondents.

Pilot survey of around 50 respondents has been done in September-2021. Because of

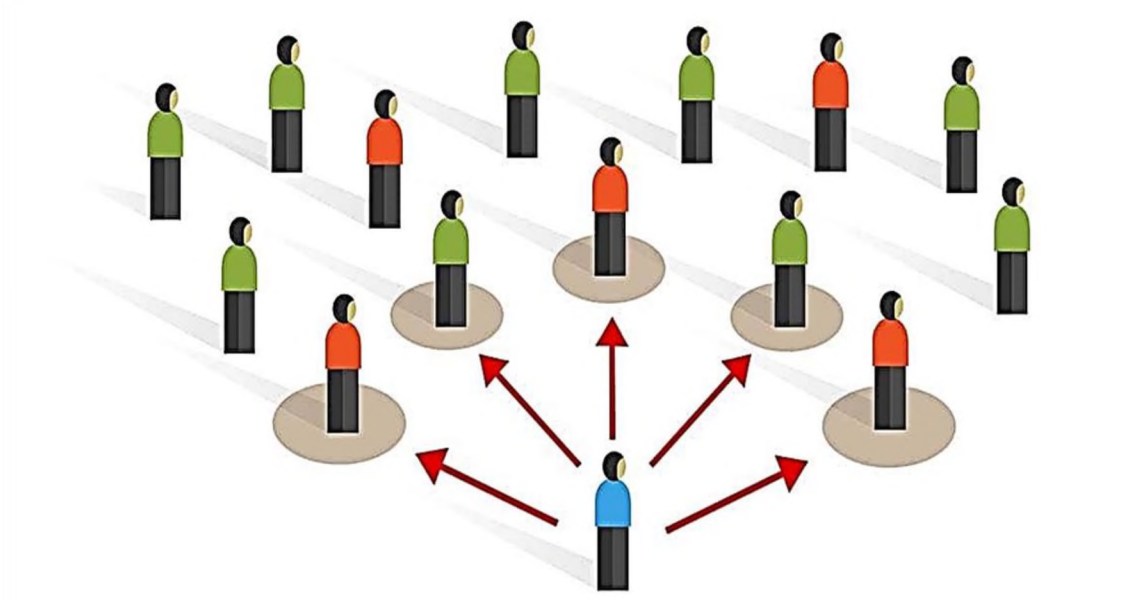

Figure 3.1: Convenience Sampling

3. Convenience sampling allows researchers to generate more samples with less or no investment and in a brief period. Easy to do research: The name of this surveying technique clarifies how samples are formed. Elements are easily accessible by the researchers and so, collecting members for the sample becomes easy. That is why this study used Convenience sampling Technique for the collection of data.

[6]In Pakistan around 5 Million SMEs are registered. So, the sample size with Confidence interval at 95%, Margin of Error at 5%, Population Proportion at 50% and Population Size with 5 Million SMEs is 385 SMEs and study took responses from around 400 respondents (More than minimum sample size 385).

before and after covid-19 analysis each respondent fills 2 questionnaires one related to before Covid-19 situation (via recall methodology) of the SMEs and second related to after Covid-19 situation of the SMEs. In questionnaire options are given to the respondents named as "Others" in which they can write any other factor other than the factors identified in the questionnaire. As, the number of respondents increases the responses in "Others"[7] had also increased. So, by Thematic Analysis[5] the study converted all those different answers into some variables by making a new equation that has been used to estimate the results of after Covid-19 situation of the SMEs. The study used descriptive statistics and Structural Equation Modeling (SEM) to find out the impact of various factors on the development of SMEs in Pakistan before and after Covid-19.

3.2.THEORETICAL FRAMEWORK

The framework has suggested the market oriented economy based on a stable legal and regulatory framework where businesses can operate freely. Due to this, the risk aversion aspect of the SME declines. Education about how to do business and its activities increases the development to this sector. The government funding and assistance program in getting availability of finance and adoption of new technologies also promote the development of SMEs. One Significant difference is identified by the literature review. Past literature (Guthrie, 2004; Osano, 2019; Berglund and Malmsjö, 2009) has focused that SMEs should focus on proper marketing needs to compete around the world to earn foreign currency. Government support is referred to as encouraging policies and regulations which are supported for the SME's development. Help plan provide easy availability and access to

4. It is an option for extra variables and factors which affecting the SMEs but not included in the asked variables of the questionnaire.

5. Thematic analysis is used in **qualitative research** and focuses on examining themes or patterns of meaning within data. This method can emphasize both organization and rich description of the data set and theoretically informed interpretation of meaning.

finance as well and the adoption of new technologies. Legal and regulatory structure includes anti-corruption and political solidity to support SMEs (Abrar-Ul-Haq et al., 2015).

3.3.CONCEPTAL FRAMEWORK

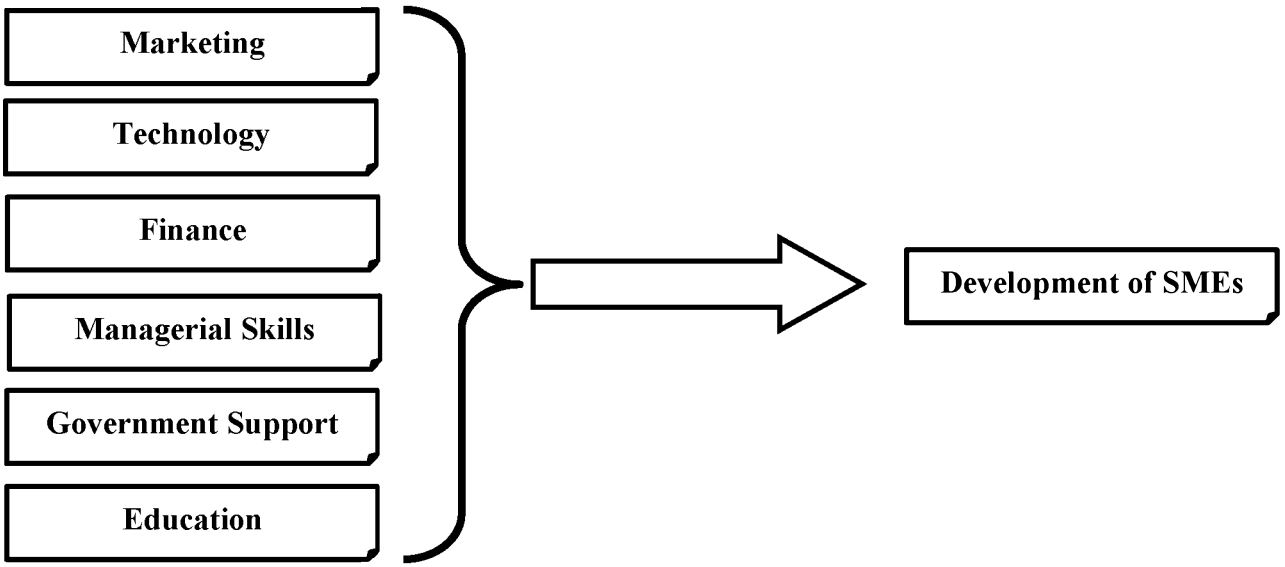

Figure 3.2: Detail of Variables (Before Covid-19)

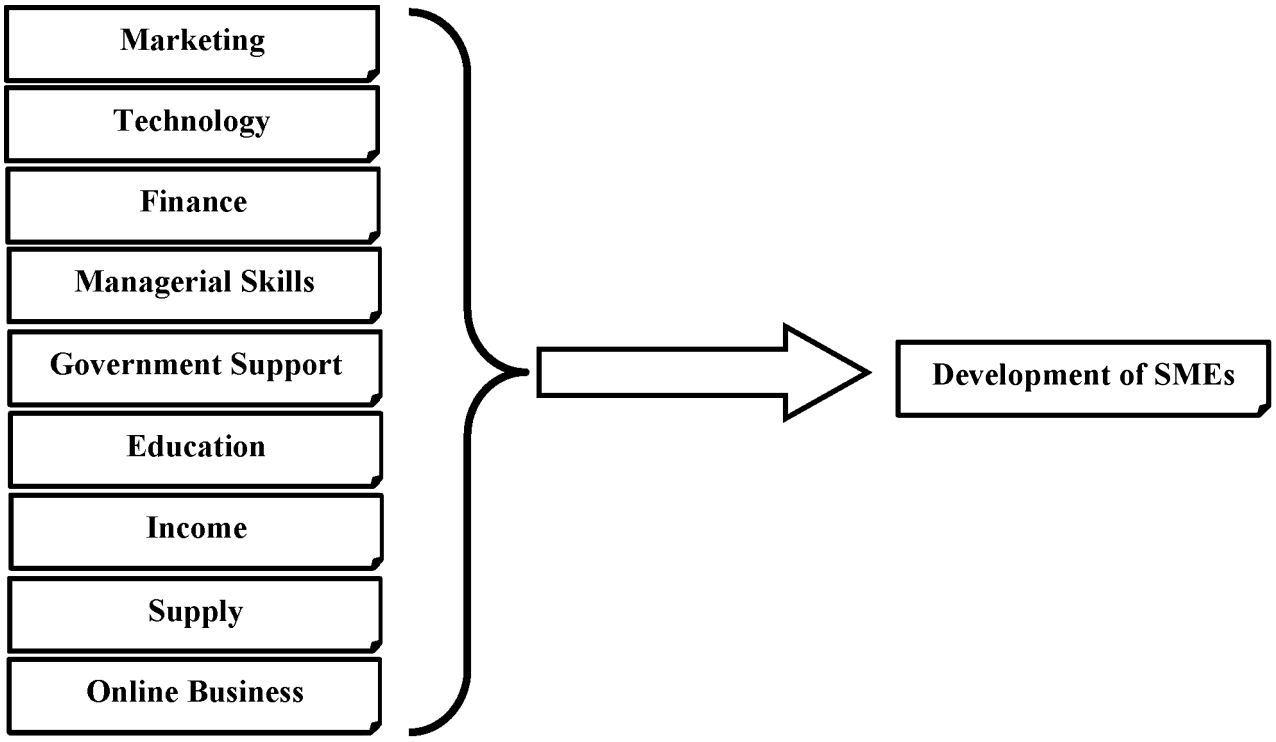

Figure 3.3: Detail of Variables (After Covid-19)

Based on the above given framework the statistical model of the study is as follows:

$$SMED = \beta_0 + \beta_i X_i + \mu_i \quad (3.1)$$

After incorporating independent variables and equation the before covid-19 model is as follows:

$$SMED = \beta_0 + \beta_1 MKT + \beta_2 TEC + \beta_3 FIN + \beta_4 MS + \beta_5 GOV + \beta_6 EDU + \mu_i \quad (3.2)$$

Where, SMED = Development of SMEs and Xi are independent variables: MKT = Marketing, TEC = Technology, FIN = Finance, MS = Managerial Skills, GOV = Government Support, and EDU = Education, respectively.

The new model after the Thematic Analysis of collected responses that estimated the after Covid-19 effects on the development of the SMEs is as follows:

$$SMED = \beta_0 + \beta_1 MKT + \beta_2 TEC + \beta_3 FIN + \beta_4 MS + \beta_5 GOV + \beta_6 EDU + \beta_7 INC + \beta_8 SUP + \beta_9 ONB + \mu_i \quad (3.3)$$

Where, SMED = Development of SMEs is dependent variable and the independent variables are as follows: MKT = Marketing, TEC = Technology, FIN = Finance, MS = Managerial Skills, GOV = Government Support, and EDU = Education, INC = Income and SUP = Supply, respectively.

There is another variable made by thematic analysis after getting the responses from the respondents is "ONB = Online Business"[8]. This variable is explained demographically.

[8] During collection of data from respondents they mentioned few other factors that were not the part of the selected factors of the study. So, that is why by thematic analysis there is need to include those factors in this study to make the results more realistic and according to the situation the SMEs were faced.

3.4.Detail of the Respondents:

The primary data has been collected in two stages i.e. in first stage a pilot survey of 50 SMEs of Islamabad & Rawalpindi was conducted using random sampling and in the second stage all required data from the SMEs via questionnaire, face to face interviews and using link of the questionnaire made on Google forms have been collected. Owing to lack of financial resources and shortage of time the study covers the area of only twin cities Islamabad and Rawalpindi and compiled the responses of approximately 400 SMEs, in which each SME filled two questionnaires. One is based on recall methodology[9] and so based on before Covid-19 situation and the second questionnaire is based on the information of after Covid-19 situation. The convenience sampling technique has been used and the final stage respondents were identified from the respondents of pilot survey. The questionnaire is adapted from the studies of (Abrar-Ul-Haq et al., 2015; Indarti & Langenberg, 2004) with some modifications. Different tests like CFA, rho_A, data reliability, AVE and CR have been applied on the data and also different items[10] were used to rise the reliability and validity of data which is measured by the 5-Likert Scale, like 1 for strongly disagree to 5 is for strongly agree. The details of the respondents both before and after Covid-19 are given below:

[9] The process of recalling facts or events from the past without a clear signal to guide you.

[10] A question that includes a list of possible answers that participant can select from on a survey item.

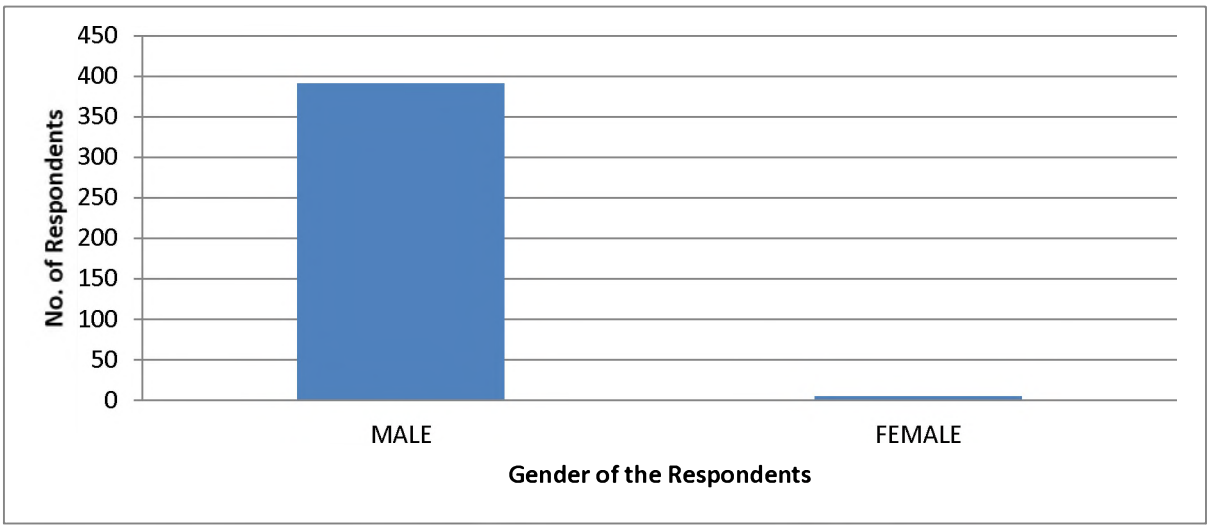

Figure 3.4: Gender of the Respondents

This graph is showing the gender of those respondents from whom the data of both (before& after) Covid-19 situation has been collected. The data of both (before& after) Covid-19 situation has been collected from approximately 400 respondents. In which 391 were male respondents and only 5 were the female respondents.It shows that 98.7% responses belongs to the male respondents and only 1.3% respondents belongs to the female respondents.

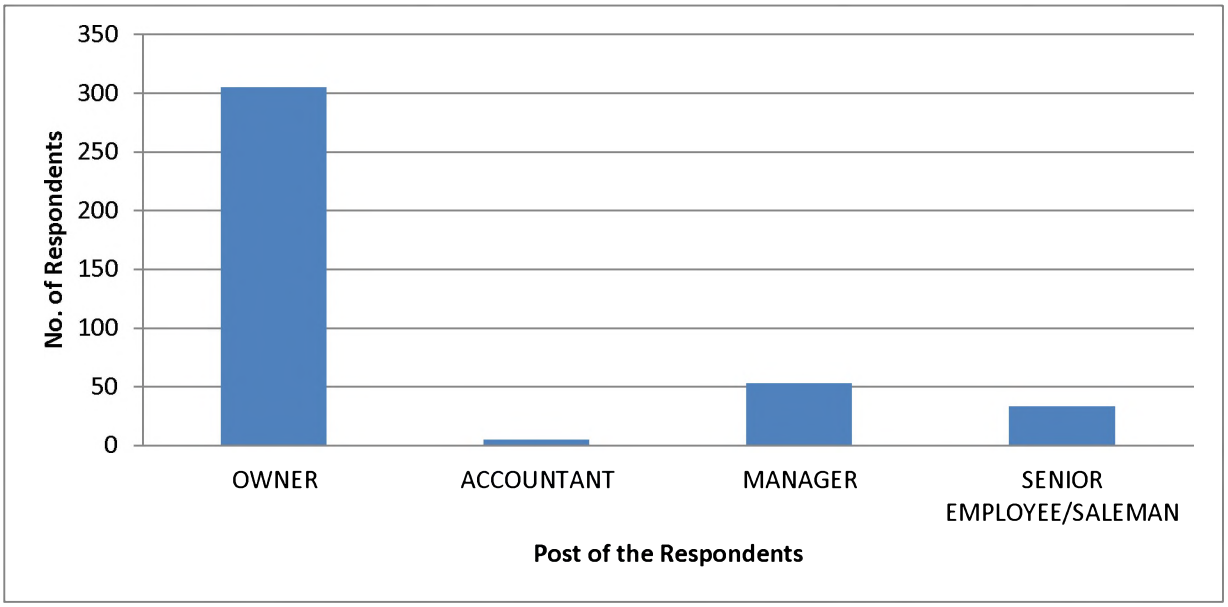

Figure 3.5: Post of the Respondents

This graph is showing the post of those respondents from whom the data of both (before & after) Covid-19 situation has been collected. The data of both (before & after) Covid-19 situation has been collected from appproximately 400 respondents. In which 305 respondents were Owner, 33 respondents were Senior Saleman or Senior Employee, 53 respondents were Managers and only 5 respondents were Accountants. It shows that 77% responses has been collected from the Owners of the SMEs, 1.25% responses has been collected from Accountant of the SMEs, 13.5% responses has been collected from the Manager of the SMEs and 8.25% responses has been collected from the Senior Employee/Saleman of the small and medium enterprises (SMEs).

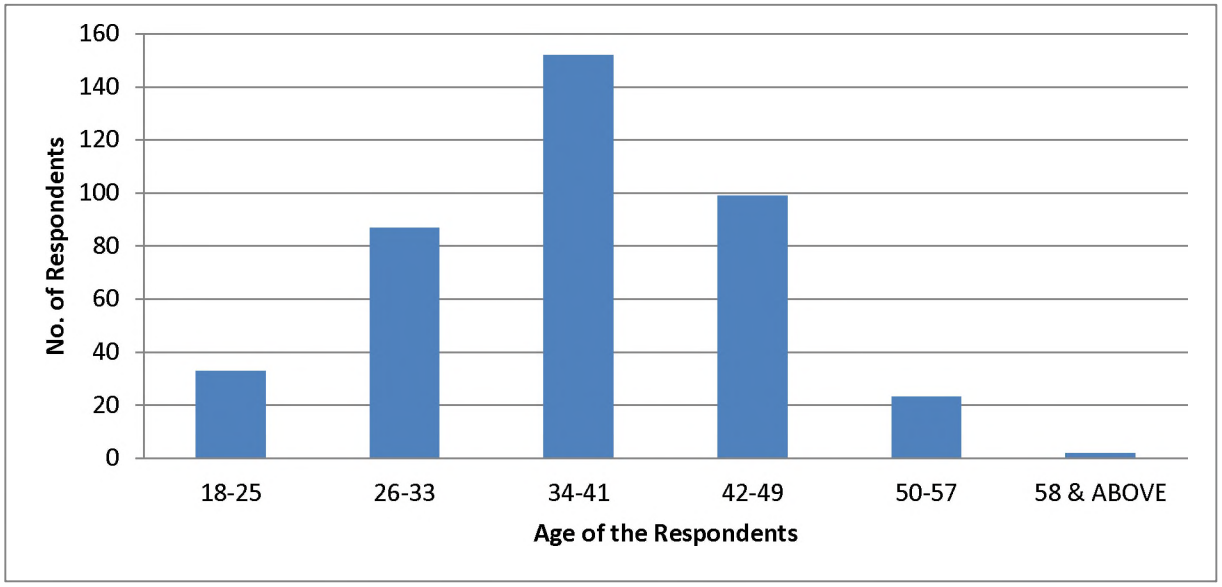

Figure 3.6: Age of the Respondents

This graph is showing the age of those respondents from whom the data of both (before & after) Covid-19 situation has been collected. The data of both (before & after) Covid-19 situation has been collected from approximately 400 respondents. In which 152 respondents belongs to age of 34-41 years, 99 respondents belongs to age of 42-49 years, 87 respondents belongs to age of 26-33 years, 33 respondents belongs to the age of 18-25 years, 23 respondents belongs to the age of 50-57 years, and 2 respondent belong to the age of

above 58 years. It shows that 8.25% responses has been collected form the age of 18-25 years, 22% responses has been collected from the age of 26-33 years, 38.25% responses has been collected from the age of 34-41 years, 25% responses has been collected from the age of 42-49 years, 6% responses has been collected from the age of 50-57 years and 0.5 % responses has been collected from the age of 58 & above year's respondents.

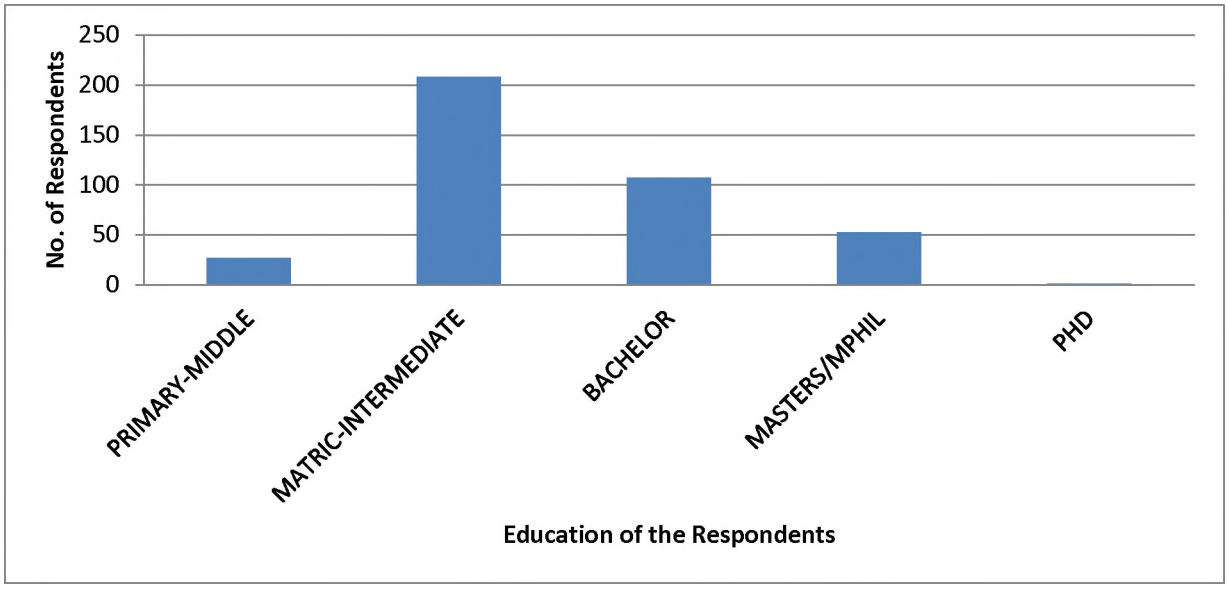

Figure 3.7: Education of the Respondents

This graph is showing the education of those respondents from whom the data of both (before & after) Covid-19 situation has been collected. The data of both (before & after) Covid-19 situation has been collected from approximately 400 respondents. In which 27 respondents were Primary/Middle passed, 208 respondents were Matric/Intermediate passed, 107 respondents were Bachelor degree holder, 53 respondents were Masters/MPhil passed and 1 respondent was PHd degree holder. It shows that 7% responses has been given by Primary/Middle passed respondents, 52.75% responses has been given by the Matric/Intermediate passed respondents, 27% responses has been given by the Bachelor passed respondents, 13% responses has been given by the Masters/Mphil passed respondents and 0.25% responses has been given by the PHd degree holder. It shows that the respondents

of the questionnaires of both (before & after) Covid-19 situation belongs to different study backgrounds. Some are highly qulified, some are average qualified and some are low qualified.

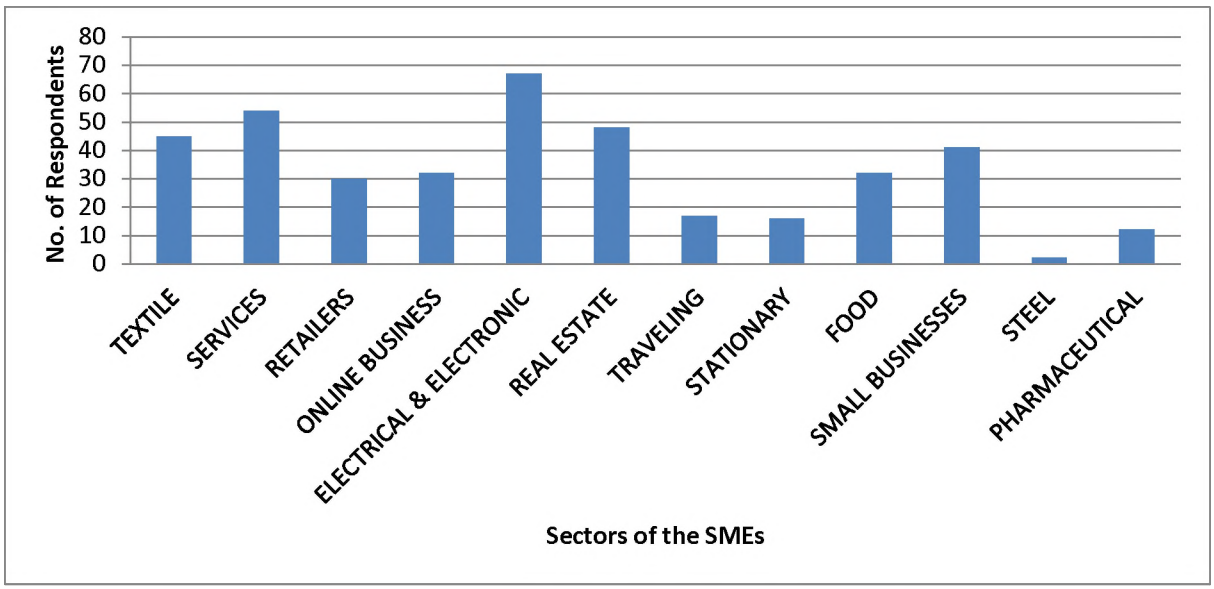

Figure 3.8: Sector of the SMEs

This graph is showing the sectors of the SMEs of those respondents from whom the data of both (before& after) Covid-19 situation has been collected. the data of both (before& after) Covid-19 situation has been collected from approximately 400 respondents. In which 45 SMEs belongs to Textile Sector, 54 SMEs belongs to Services Sector, 30 SMEs belongs to Retialers Sector, 41 SMEs belongs to Small Business Sector, 48 SMEs belongs to Real Estate Sector, 67 SMEs belongs to Electrical & Electronics Sector, 32 SMEs belongs to Food Sector, 12 SMEs belongs to Pharmaceutical Sector, 16 SMEs belongs to Stationary Sector, 32 SMEs belongs to Online Business Sector, 17 SMEs belongs to Traveling Sector, 2 SMEs belongs to Steel Sector. It shows that, 11 percent SMEs belongs to Textile Sector, 14 percent SMEs belongs to Services Sector, 08 percent SMEs belongs to Retialers Sector, 10 percent SMEs belongs to Small Business Sector, 12 percent SMEs belongs to Real Estate Sector, 17 percent SMEs belongs to Electrical & Electronics Sector, 08 percent SMEs belongs to Food

Sector, 03 percent SMEs belongs to Pharmaceutical Sector, 04 percent SMEs belongs to Stationary Sector, 08 percent SMEs belongs to Online Business Sector, 04 percent SMEs belongs to Traveling Sector, 01 percent SMEs belongs to Steel Sector. So, the variety of sectors shows that the study tried to cover most of the sectors of the SMEs as much as it can.

The structural models made in statistical software "Smart PLS" are also given below:

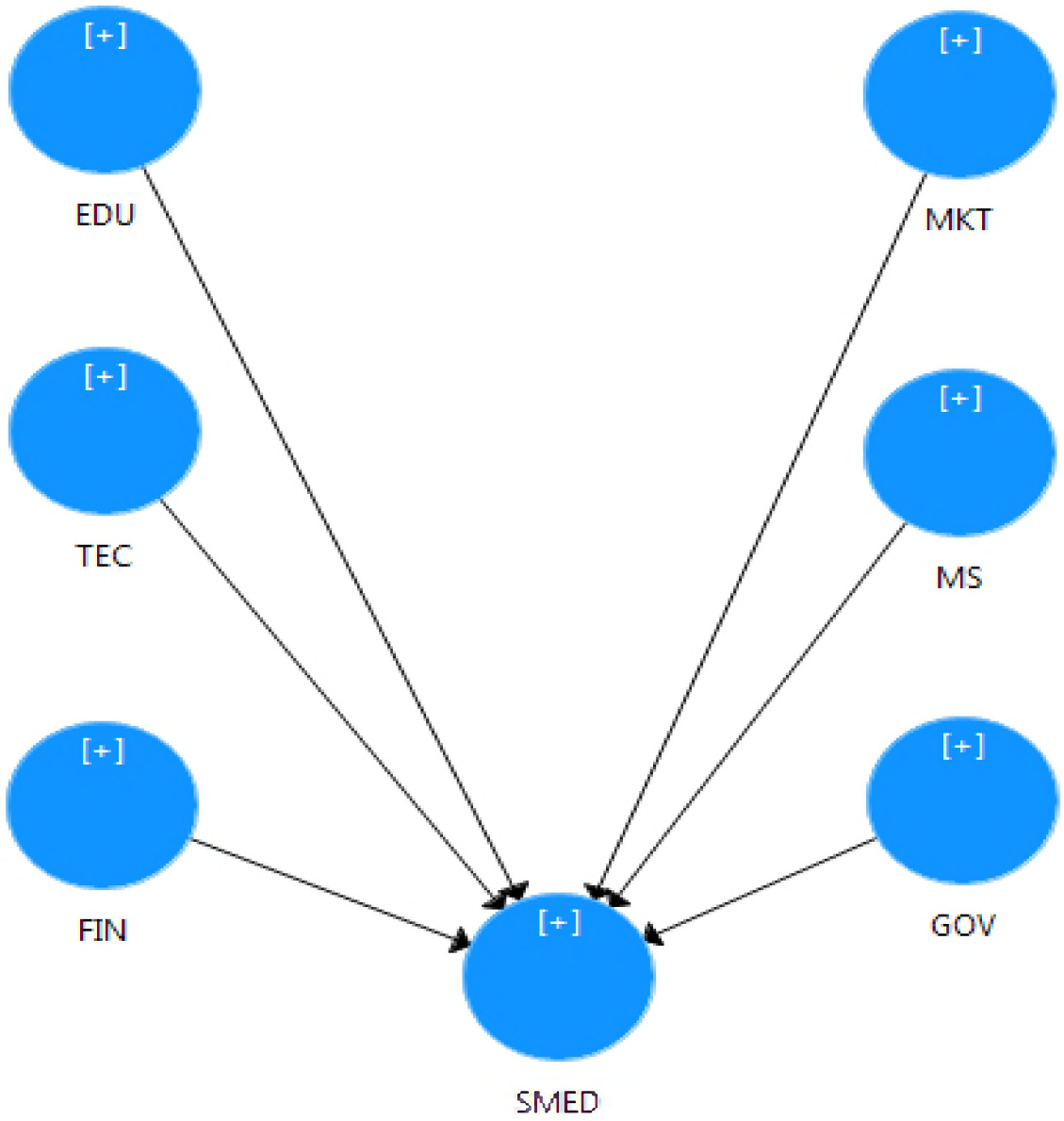

Figure 3.9: Before Covid-19

EDU = Education, MKT = Marketing, TEC = Technology, MS = Managerial Skills, FIN = Finance, GOV = Government Support, SMED = Development of the small and medium enterprises.

In figure no. 3.9; the study demonstrated the before covid-19 situation model, made on Smart-PLS. In this model there are six explanatory variables and one explained variable. Where the explanatory variables are, Government Support = GOV, Marketing = MKT, Finance = FIN, Technology = TEC, Managerial Skills = MS and Education = Edu, and a dependent variable is, Development of the small and medium enterprises = SMED. This model is made for estimation purposes by applying the Structural Equation Modeling (SEM) on it.

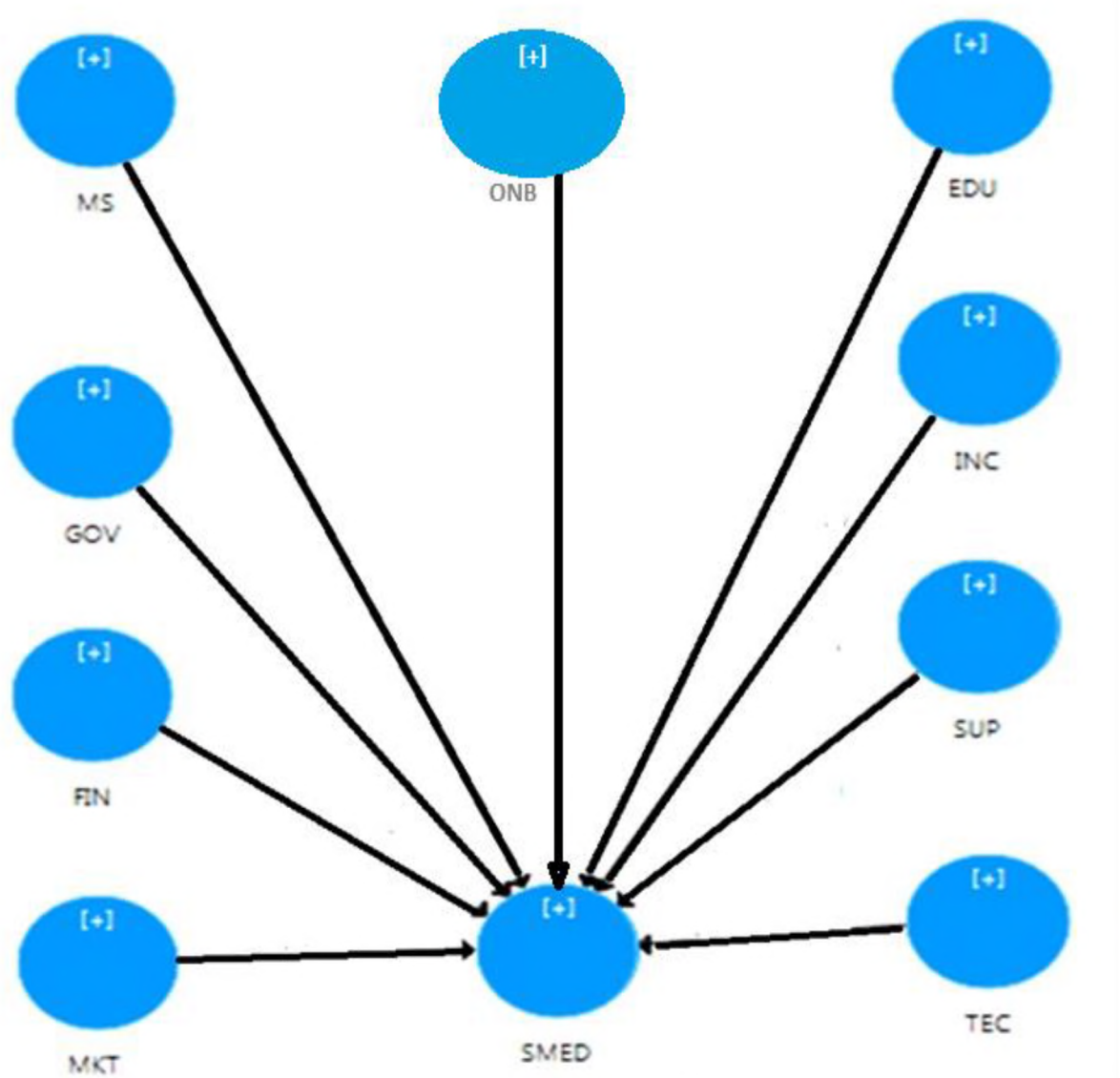

Figure 3.10: After Covid-19

EDU = Education, MKT = Marketing, TEC = Technology, MS = Managerial Skills, FIN = Finance, GOV = Government Support, INC = Income, SUP = Supply, ONB = Online Business, SMED = Development of the small and medium enterprises.

In figure no. 3.10; the study demonstrated the after covid-19 situation model, made on Smart-PLS. In this model there are eight explanatory variables and one explained variable. Where the explanatory variables are, Marketing = MKT, Finance = FIN, Government Support = GOV, Managerial Skills = MS, Technology = TEC, Supply = SUP, Income = INC, Education = Edu, Online Businesses = ONB, and a dependent variable is, Development of the small and medium enterprises = SMED. This model is made for estimation purposes by applying the Structural Equation Modeling (SEM) on it.

3.5.Data Analysis

Validation of the established research model was done using SEM-PLS (Wong, 2013). For data analysis, the author used Smart-PLS 3.0 software (Ringle et al., 2015) with bootstrapping set to 5000 subsamples to implement the PLS methods (Hair et al., 2011). Because the author's decision to employ SEM-PLS was based on the examination of components from two separate time periods, PLS is thought to be the best option(Hair Jr et al., 2016). PLS is the popular method for determining the dimensions and structural model.

3.6.Data Description

The study used primary data for analysis by using questionnaire one is related to before Covid-19 situation of SMEs and second is related after Covid-19 situation of SMEs. The questionnaire is adapted from (Abrar-Ul-Haq et al., 2015; Indarti and Langenberg, 2004). The detail of the dependent and independent variables are given below:

The dependent variable,

Development of SMEs (SMED): By Rapid sales growth rate, falling or declining cost of production, increasing gross profit margin, high customer retention rate the development of the SMEs can be measured. A firm's growth can also be measured by dividing the difference

between the current period value and the previous period value with the previous period value.

In this study the development of SMEs is measured by four indicators, satisfaction with the growth of net income, satisfaction with the time needed to reach breakeven point, consider business is successful, and consider business is growing.

The independent variables,

Marketing (MKT): Marketing refers to activities a company undertakes to promote the buying or selling of a product or service.

In this study the Marketing (MKT) is measured by four indicators, Distribution Channel, Market Potential, Searching new market is not difficult and Well Planned Marketing.

Technology (TEC): The use of scientific knowledge for practical purposes or applications, both in industry or in our everyday lives including everything from the wheel to computers to medicines to zippers and buttons on clothes is known as technology.

In study Technology (TEC) is measured by five indicators, existing technology suffices to support all production processes, existing technology supports innovation, existing technologies easily maintainable, new technology to support innovativeness in the business is attainable, and adoption of new technology increases output.

Finance (Fin): The process of raising funds or capital for any kind of expenditure in known as Finance. It is required for purchasing assets, goods, raw materials and for performing all other economic activities. Precisely, it is required for running all the business operations.

In this study Finance (FIN) is measured by four indicators, existing capital is sufficient to maintain the business, existing capital is sufficient to expand the business, Can additional capital easy to get, and have accessible alternatives of capital sources if needed.

Managerial Skills (MS): Managerial Skills are the knowledge and ability of the individuals in a managerial position to fulfill some specific management activities or tasks.

In this study Managerial Skills (MS) is measured by four indicators, managerial skills are important for running a successful business, Have good leadership skills, have good communication skills, and decision making skills are very important for the success of business.

Government Support (GOV): Any type of action from the government that support businesses like, change the way businesses work and influence the economy either by passing laws, or by changing its own spending or taxes. As, extra government spending or lower taxes can result in more demand in the economy and lead to higher output and employment.

In this study Government Support (GOV) is measured by four indicators, support of government is satisfactory, got business permit easily, having no problems when contact with government, and Do government policies affect your business positively.

Education (EDU): Training that is structured and takes place within a planned setting, like a classroom or online. Formal education is also called structured learning or synchronous learning. The different examples of formal learning are classroom instruction, web-based training, remote labs, e-learning courses, workshops, seminars, webinars, etc.

In this study Education (EDU) is measured by three indicators, Does formal education is essential for development of business, Does formal education helps in taking good decisions, and Does formal education improves understanding of business.

Income (INC): Income is money or value that an individual or business entity receives in exchange for providing a food or services or through investing capital.

In this study Income (INC) is measured by four indicators, Decrease in Sales, Decrease in Consumer purchasing power, Inflation and Unavailability of Goods for sale due to lockdown.

Supply (SUP): The total amount of a given product or service a supplier offers to consumers at a given period and a given price level. It is usually determined by market movement. For instance, a higher demand may push a supplier to increase supply.

In this study Supply (SUP) is measured by four indicators, Decrease in Supply of Goods, No Access to Transport due to lockdown, Decrease in Demand by consumers and Unavailability of Raw Material.

Online Business (ONB): An online entrepreneur is a business owner that conducts their business on the internet. Like other entrepreneurs, they often take financial or other personal risks to launch their own company. Online entrepreneurs may use a variety of business models to provide products or services.

In this study Online Business (ONB) is measured by four indicators, growing business gradually, Increase in Sales, Online Shifts due to Covid-19 affect positively and Government Policy of allowing online business affect positively.

3.7.Econometric Techniques

The methodology of this study consists of various statistical techniques to check the factors affecting the development of SMEs before and after Covid-19. The study applied the Reliability Test, Cronbach Alpha Test, Common Factor Analysis (CFA), and Structural

Equation Modeling (SEM) and used descriptive statistic to check the change (before and after Covid-19) occurs in factors affecting the development of SMEs in Pakistan.

3.7.1. The Reliability Test

The reliability of the test refers to the level at which the test is measured without error. It has a lot to do with experimental testing. The reliability of the test can be considered as clear; the rate at which it occurs without error.

3.7.2. Cronbach Alpha Test

Cronbach's alpha is a statistic that evaluates inner reliability within a set of experimental items that (a) the researcher believes all measure the same structure, (b) are so correlated, and (c) may be built into a specific measure. It is a part of a variety of reliability measurements.

3.7.3. Common Factor Analysis (CFA)

Factor analysis is the method of sinking a large number of variables to only a few. As a result, you can quickly use such information for study. Factor analysis is a compilation of statistical instruments that can be utilized to find the latent aspects that make clear data.

3.7.4. Structural Equation Modeling (SEM)

The statistical method of structural equation modeling (SEM) is used to quantify and examine the connections between observable and latent variables. It searches for linear causal correlations between variables while taking measurement error into account; it is similar to regression analysis but more widely used.

3.7.5. Raykov's rho_A

Raykov's rho (also known as reliability rho and composite reliability) is a measure of reliability that ranges from zero to one, similar to Cronbach's alpha. The greater the value, the more trustworthy the scale is. A rho value of greater than 0.8 denotes high internal consistency, whereas 0.7 denotes inadequacy(Cicchetti, 1994).

3.7.6. Average of Variable Extracted (AVE)

The average of variance extracted (AVE) is a convergent validity indicator that quantifies how much variance is captured by a construct vs how much variance is due to measurement error.

3.7.7. Composite Reliability (CR)

Composite reliability, often referred to as build reliability, is a metric of scale component internal consistency that is comparable to Cronbach's alpha (Netemeyer et al., 2003). It can be determined by dividing the entire real score variance by the overall scale score variance (Brunner and SÜβ, 2005).

3.8.QUALITATIVE WORK:

In order to validate empirical findings of this study, in depth interviews were conducted from following officials.

a. Dr. Rashid Mahmood, The Director of HBRI, NARC, Islamabad also the member of SMEDA.
b. Mr. Abubakar of Islamabad Chamber of Small Traders & Small Industries (ICSTSI).
c. Mr. Asghar of Islamabad Chamber of Small Traders & Small Industries.
d. Mr. Mudassar Fiaz Chaudary, former vice president of ICSTSI.

The comments on the findings of this study by aforementioned members are almost similar. The thematic review of the questions/answers is given below:

About number of SMEs registered they said that there are around 4 Million SMEs but the exact amount of registered SMEs is not confirmed. Furthermore, they said that there is a portal for the registration of the SMEs made in 2021 on whom SMEs can easily be registered and for few SMEs there is a special grant of Rs. 25000/- which is given by SMEDA to the SMEs for registration purpose.

In response to the question that "Is SME policy 2021 is still working after the removal of PTI government because it was given by them"? They said yes the policy is still working policy and did not affect by the change of the government.

In a publication of SMEDA newsletter (Oct-Dec, 2021; Vol. 16, Issue. 04) it was written that 78% SMEs not getting the benefit because they are un-documented. In the answer of this they said that yes there is an issue of un-documented SMEs and in our workshops and other scenarios we are working and requesting to the SMEs for getting registered and also giving grant of Rs. 25000/- for registration. So, we are hoping that the situation will get better as we are working on this issue more and more.

In a publication of SMEDA newsletter (Oct-Dec, 2021; Vol. 16, Issue. 04) it was written that this policy will be a game changer. So, when I asked from them that when 78% percent SMEs are un-documented than how this policy going to be a game changer? So, on this question they answer that: yes, there is an issue of less no. of registered SMEs but those who are registered are getting benefit from this policy. That is why we are continuously requesting to SMEs to get registered and gets the benefit from the policies and schemes issued by SMEDA.

On a question of workshops conducted by SMEDA they answer that minimum requirement of No. of participant SMEs are 25. If the number of participants SMEs is less than 25 then that workshop not held. They also said that in few workshops the number of participants becomes more than 50 even 100 also. Furthermore, during discussion on digitization of SMEs they said that yes we are also working on this issue and trying in our workshops to teach them about digitization and more use of technology that will benefit them as during Covid-19 those SMEs gets benefit who were working online by using technology. Furthermore, the Mudassar Fiaz Chaudary the Former Vice President ICSTSI also discuss about digitization in his blog "How to Help Small Businesses to Survive Covid-19?" published in (Bussiness Connect ICSTSI Newsletter Oct-Dec 2021 Volume-3|Edition-I) in which he also discussed about the digitization shift, and remote working models for workers that remains for post-Covid as well.

In a publication of SMEDA newsletter (Oct-Dec, 2021; Vol. 16, Issue. 04) It is written that "Federal Minister Industries and Production Makhdoom Khusro Bakhtiar, in his address, informed that business regulations stifling SME growth are being removed. So, far over 70 reforms that are benefiting SMEs have been removed." I asked from them that how it goes in the favor of SMEs that "70 reforms that are benefiting SMEs have been removed" on this question they said that we have no answer for this might be it's a printing error. But, we are not confirmed about this.

In last, during the discussion on the findings of the study they agreed with our findings and said that yes we agree with your findings and definitely these are the main factors (Technology, Finance and Marketing) which are playing main role in the development of the SMEs. They also said that inflation is one of the main issues as well because due to inflation not only the purchasing power of the customers getting decreases but SMEs also not meeting

to their cost of goods. They also give their own real life examples related this issue and said that inflation is also a main factor that's a hurdle in the development of SMEs.

CHAPTER 4

4. RESULTS AND DISCUSSIONS

4.1.Introduction

In this chapter the study described the results of the study, which consist of two different time span, in which the study discussed about (Item Measurement Properties, Correlations, Path Analysis of the factors, and two models made on the statistical software PLS-SEM, one model is about the Path Analysis that showing the beta values of the factors and other model is showing the P-values of the factors) before covid-19 and after covid-19 situations. The study made an analysis in the last of this chapter to describe the main factors that most significantly affected the growth of the small and medium enterprises (SMEs), before and after covid-19.

4.2.Measurement of the Model

Table 4.1: Item Measurement Properties (Before Covid-19)

CONSTRUCTS/ITEMS	F.L	CA	rho_A	CR	AVE
DEVELOPMENT OF SMES		**0.876**	**0.877**	**0.915**	**0.729**
SMED1	**0.836**				
SMED2	**0.835**				
SMED3	**0.872**				
SMED4	**0.871**				
MARKETING		**0.867**	**0.881**	**0.910**	**0.718**
MKT1	**0.902**				
MKT2	**0.862**				
MKT3	**0.721**				
MKT4	**0.893**				
TECHNOLOGY		**0.850**	**0.856**	**0.893**	**0.626**
TEC1	**0.830**				
TEC2	**0.851**				
TEC3	**0.766**				

TEC4	**0.708**				
TEC5	**0.793**				
FINANCE		**0.874**	**0.877**	**0.914**	**0.726**
FIN1	**0.852**				
FIN2	**0.871**				
FIN3	**0.840**				
FIN4	**0.845**				
MANAGEMENT SKILLS		**0.920**	**0.921**	**0.944**	**0.808**
MS1	**0.860**				
MS2	**0.930**				
MS3	**0.897**				
MS4	**0.907**				
GOVERNMENT SUPPORT		**0.756**	**0.773**	**0.766**	**0.773**
GOV1	**0.839**				
GOV2	**0.870**				
GOV3	**0.780**				
GOV4	**0.763**				
EUCATION		**0.713**	**0.729**	**0.756**	**0.873**
EDU1	**0.754**				
EDU2	**0.793**				
EDU3	**0.762**				

F.L = Factor Loadings, CR = Composite Reliability, CA =Cronbach Alpha, AVE = Average of Variance Extracted, rho_A = Raykov's rho

4.2.1. Before Covid-19

By summarizing the results the study found that several indicators were utilized to verify and validate the measurement model, including indicator reliability, rho_A, convergent validity, discriminant validity, and internal consistency e.g.., (Ab Hamid et al., 2017; Chin, 2010; Hair Jr et al., 2016; Schumacker & Lomax, 2004). Table No. 4.1 shows that all standard values for each construct are higher than cutoff values such as 0.7 for RHO, CR, and CA, and 0.5 for AVE (Chin, 1998; Fornell & Larcker, 1981; Hair et al., 2011). It means that all of the elements are reliable in terms of internal consistency.

Table 4.2: Item Measurement Properties (After Covid-19)

CONSTRUCTS/ITEMS	F.L	CA	rho_A	CR	AVE
DEVELOPMENT OF SMES		**0.974**	**0.974**	**0.981**	**0.927**
SMED1	**0.958**				
SMED2	**0.959**				
SMED3	**0.966**				
SMED4	**0.967**				
MARKETING		**0.948**	**0.949**	**0.962**	**0.865**
MKT1	**0.936**				
MKT2	**0.943**				
MKT3	**0.883**				
MKT4	**0.956**				
TECHNOLOGY		**0.900**	**0.905**	**0.926**	**0.716**
TEC1	**0.909**				
TEC2	**0.842**				
TEC3	**0.812**				
TEC4	**0.865**				
TEC5	**0.797**				
FINANCE		**0.960**	**0.960**	**0.971**	**0.893**
FIN1	**0.942**				
FIN2	**0.950**				
FIN3	**0.940**				
FIN4	**0.948**				
MANAGEMENT SKILLS		**0.968**	**0.969**	**0.977**	**0.913**
MS1	**0.959**				
MS2	**0.951**				
MS3	**0.951**				
MS4	**0.961**				
GOVERNMENT SUPPORT		**0.846**	**0.935**	**0.901**	**0.708**
GOV1	**0.952**				
GOV2	**0.793**				
GOV3	**0.943**				
GOV4	**0.912**				
EUCATION		**0.928**	**0.934**	**0.954**	**0.875**
EDU1	**0.949**				
EDU2	**0.945**				
EDU3	**0.912**				
INCOME		**0.930**	**0.960**	**0.950**	**0.825**
INC1	**0.937**				
INC2	**0.908**				
INC3	**0.860**				
INC4	**0.927**				
SUPPLY		**0.972**	**0.997**	**0.979**	**0.922**
SUP1	**0.963**				
SUP2	**0.957**				
SUP3	**0.952**				
SUP4	**0.969**				

F.L = Factor Loadings, CR = Composite Reliability, CA = Cronbach Alpha AVE = Average of Variance Extracted, rho_A = Raykov's rho

4.2.2. After Covid-19

By summarizing the results the study found that several indicators were utilized to verify and validate the measurement model, including indicator reliability, rho_A, convergent validity, discriminant validity, and internal consistency e.g.., (Ab Hamid et al., 2017; Chin, 2010; Hair Jr et al., 2016; Schumacker & Lomax, 2004). Table No. 4.2 shows that all standard values for each construct are higher than cutoff values such as 0.7 for RHO, CR, and CA, and 0.5 for AVE (Chin, 1998; Fornell & Larcker, 1981; Hair et al., 2011). It means that all of the elements are reliable in terms of internal consistency.

4.3.Structural Model

Table 4.3: Correlations (Before Covid-19)

	EDU	FIN	GOV	MKT	MS	SMED	TEC
EDU	1.000						
FIN	0.169	1.000					
GOV	0.110	0.464	1.000				
MKT	0.171	0.645	0.633	1.000			
MS	0.210	0.760	0.529	0.707	1.000		
SMED	0.225	0.879	0.463	0.650	0.807	1.000	
TEC	0.112	0.668	0.584	0.795	0.673	0.624	1.000

4.3.1. Correlations (Before Covid-19)

Fornell-Larcker criterion(Fornell & Larcker, 1981) was used to confirm the discriminant validity, which analyses whether the relationship between two factors or constructs is stronger than the relationship between specific factors or constructs and their indicators. Because the square root of AVE for each concept exceeds the correlation between the current

and other components, discriminant validity is established(Chin, 2010). All the values of correlations are shown in table no. 4.3.

Table 4.4: Correlations (After Covid-19)

	EDU	FIN	GOV	INC	MKT	MS	SMED	SUP	TEC
EDU	1.000								
FIN	0.659	1.000							
GOV	0.587	0.838	1.000						
INC	0.200	0.347	0.273	1.000					
MKT	0.610	0.866	0.751	0.369	1.000				
MS	0.650	0.736	0.682	-0.010	0.727	1.000			
SMED	0.687	0.875	0.796	0.351	0.855	0.740	1.000		
SUP	0.314	0.425	0.410	-0.144	0.467	0.478	0.402	1.000	
TEC	0.592	0.792	0.673	0.330	0.771	0.621	0.815	0.324	1.000

4.3.2. Correlations (After Covid-19)

Fornell-Larcker criterion(Fornell & Larcker, 1981) was used to confirm the discriminant validity, which analyses whether the relationship between two factors or constructs is stronger than the relationship between specific factors or constructs and their indicators. Because the square root of AVE for each concept exceeds the correlation between the current and other components, discriminant validity is established(Chin, 2010). All the values of correlations are shown in table no. 4.4.

Table 4.5: Path Analysis (Before Covid-19)

PATHS	PATH COEFFICIENT (β)	T-STATISTICS	P-VALUES	DECISION
MARKETING	0.064	2.169	**0.030**	Positively>Significant
TECHNOLOGY	-0.067	2.512	**0.012**	Negatively>Significant
FINANCE	0.636	21.516	**0.000**	Positively>Significant
MANAGERIAL SKILLS	0.317	9.982	**0.000**	Positively>Significant
GOVERNMENT SUPPORT	-0.006	0.309	**0.758**	Negatively>Insignificant
EDUCATION	0.048	1.982	**0.048**	Positively>Significant

4.3.3. Path Analysis (Before Covid-19)

The results of the study show that out of 6 variables four variables (Marketing, Finance, Managerial Skills and Education) are positively-significantly related with the development of the SMEs, one variable (Technology) is negatively-significantly related with the development of the SMEs and one and the last variable (Government Support) shows the Negatively-Insignificant relationship with the development of the SMEs. The results reveals that the development of the SMEs positively influenced by "Marketing" ($\beta = 0.064$, $p < 0.05$), "Finance" ($\beta = 0.636$, $p < 0.05$), "Managerial Skills" ($\beta = 0.317$, $p < 0.05$), and "Education" ($\beta = 0.048$, $p < 0.05$). The detail of negatively-significantly related variable is: "Technology" ($\beta = -0.067$, $p < 0.05$), and the last variable "Government Support" shows the Negatively-insignificant relationship with the development of the SMEs and influencing the SMED by ($\beta = -0.006$, $p > 0.05$).

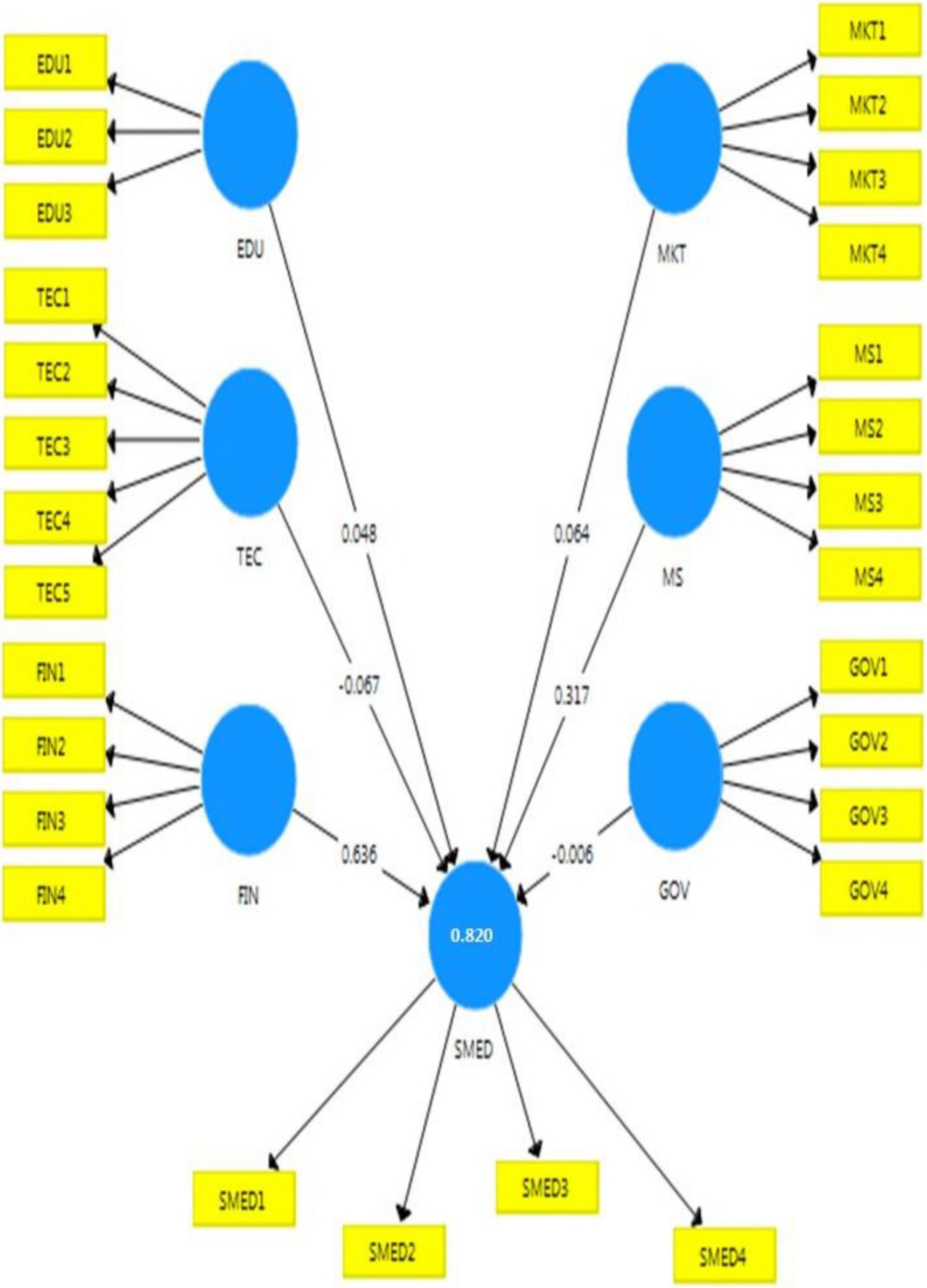

Figure 4.1: *Before Covid-19 Model (Path Analysis)*

The study figured out the explained variance adjusted R^2 value (Chin, 2010). The value of adjusted R^2 is 0.820 which is indicating that model is explained highly predictive almost 82%. The outcomes show that measurements of the before covid-19 model explained 82% variation in SMED. Figure No.4.1 also indicates the values of path coefficients (β values) of the independent variables which are representing the effects of independent variables (MKT, FIN, MS, EDU, TEC, and GOV) on the dependent variable (SMED).

Table 4.6: Path Analysis (After Covid-19)

PATHS	PATH COEFFICIENT (β)	T-STATISTICS	P-VALUES	DECISION
MARKETING	0.215	3.116	**0.002**	Positively>Significant
TECHNOLOGY	0.233	3.921	**0.000**	Positively>Significant
FINANCE	0.189	2.650	**0.008**	Positively>Significant
MANAGERIAL SKILLS	0.128	2.443	**0.015**	Positively>Significant
GOVERNMENT SUPPORT	0.151	3.028	**0.002**	Positively>Significant
EDUCATION	0.109	3.285	**0.001**	Positively>Significant
INCOME	0.067	2.852	**0.004**	Positively>Significant
SUPPLY	0.001	0.037	**0.971**	Positively>Insignificant

4.3.4. Path Analysis (After Covid-19)

The results of the study show that out of 8 variables seven variables (Managerial Skills, Technology, Finance, Marketing, Government Support, Education and Income) are positively-significantly related with the development of the SMEs, and the last variable (Supply) shows the positively-insignificant relationship with the development of the SMEs. The results reveals that the development of the SMEs positively influenced by "Marketing" ($\beta = 0.215$, $p < 0.05$),"Finance" ($\beta = 0.189$, $p < 0.05$), "Managerial Skills" ($\beta = 0.128$, $p < 0.05$), "Income" ($\beta = 0.067$, $p < 0.05$), "Education" ($\beta = 0.109$, $p < 0.05$), "Government Support" ($\beta = 0.151$, $p < 0.05$) and "Technology" ($\beta = 0.233$, $p < 0.05$). The detail of positively-insignificantly related variable is: "Supply" ($\beta = 0.001$, $p > 0.05$).

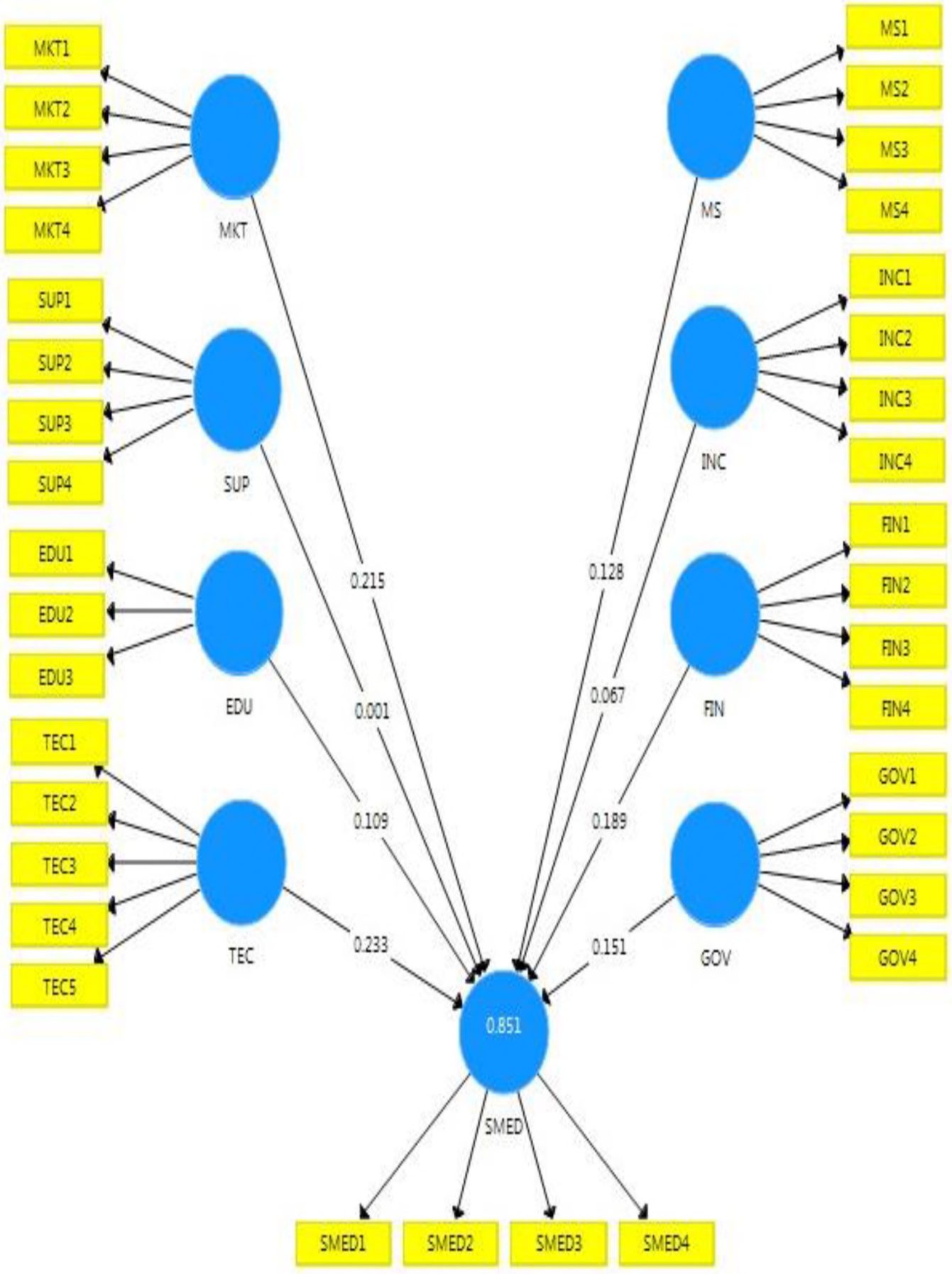

Figure 4.2: After Covid-19 Model (Path Analysis)

The study find out the explained variance adjusted R^2 value (Chin, 2010). The value of adjusted R^2 is 0.851 which is representing that model is described highly predictive 85%. The results show that measurements of the after covid-19 model explained 85% variation in SMED. Figure No.4.2 also indicates the values of path coefficients (β-values) of independent variables which are representing the effects of independent variables (MKT, TEC, FIN, MS, GOV, EDU, INC, and SUP) on the dependent variable (SMED).

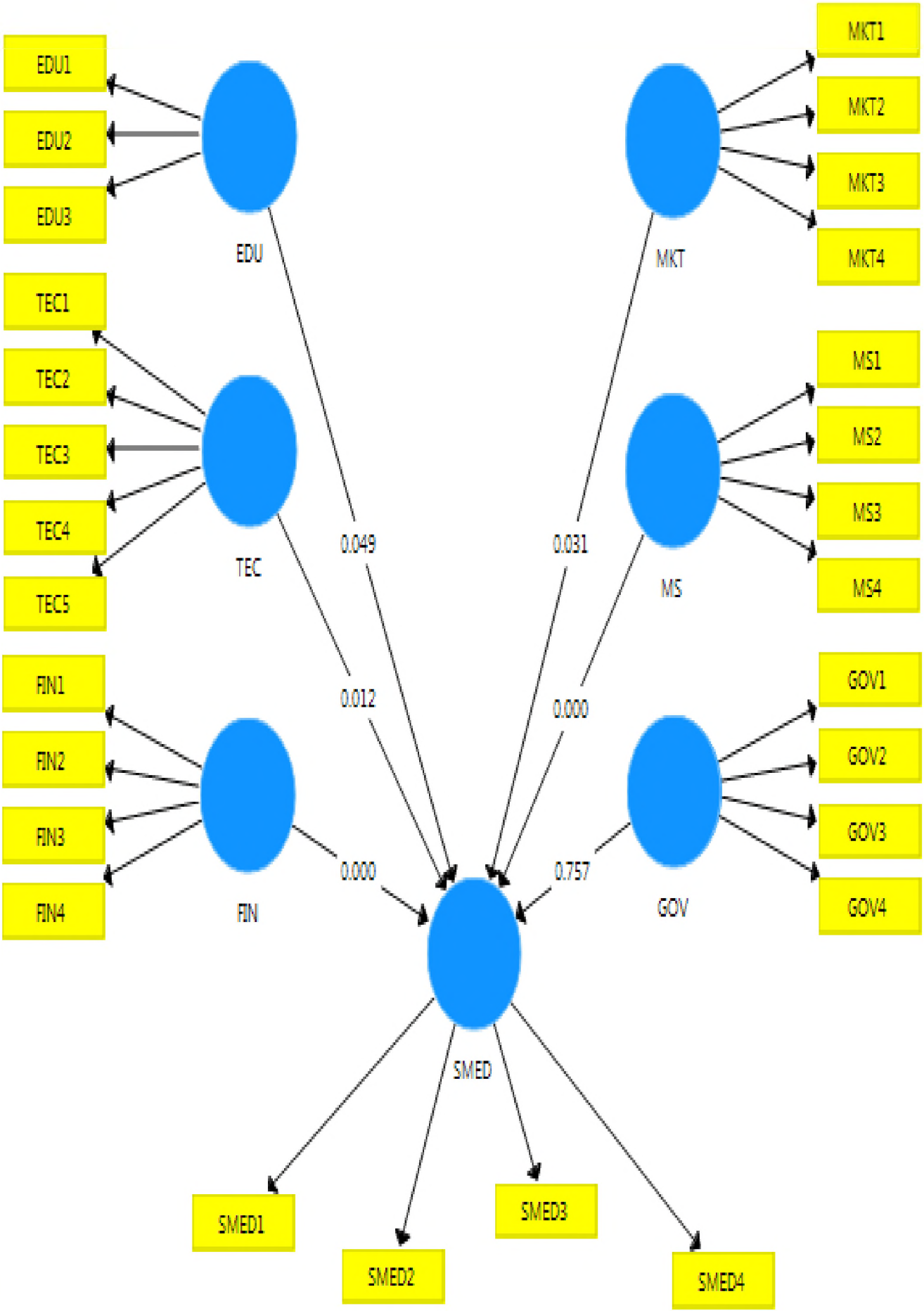

Figure 4.3: Before Covid-19 Model (P-Values)

4.3.5. Before Covid-19 Model (P-Values)

Figure No. 4.3 indicates the P-values of all the independent variables (MKT, FIN, MS, EDU, TEC, and GOV) which are presenting the significancy/insignificancy of the independent variables with the dependent variable (SMED).

The assumed structural model was then proposed to assess path estimation and overall model-fit. The data in the demonstration is suitable and appropriate, according to the analysis. As per outcomes the main fit indices are: Chi-square =2996.859, SRMR = 0.079, NFI = 0.671 and RMS theta = 0.184.The constructs and specific routes account for a large portion of the diversity in the endogenous constructs proposed.

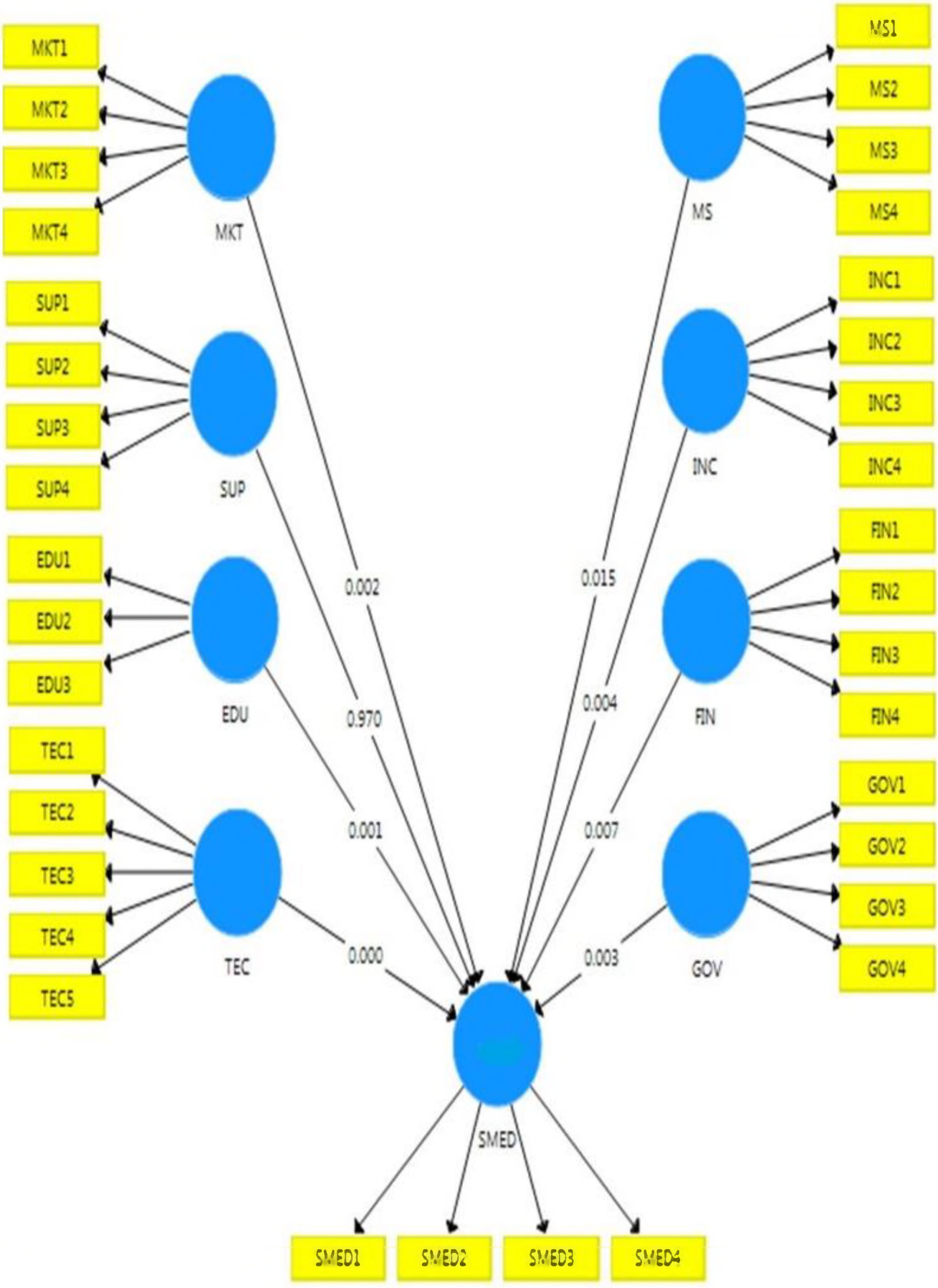

Figure 4.4: After Covid-19 Model (P-Values)

4.3.6. After Covid-19 Model (P-Values)

Figure No. 4.4 indicates the P-values of all the independent variables (MKT, TEC, FIN, MS, GOV, EDU, INC, and SUP) which are presenting the significancy/insignificancy of the explanatory variables with the explained variable (SMED).

The assumed structural model was then proposed to assess path estimation and overall model-fit. The data in the demonstration is suitable and appropriate, according to the analysis. As per outcomes the main fit indices are: Chi-square = 2655.564, SRMR = 0.052, NFI = 0.866 and RMS theta = 0.141.The constructs and specific routes account for a large portion of the diversity in the endogenous constructs proposed.

The demographic result of remaining independent variable named "Online Business (ONB)" is given below:

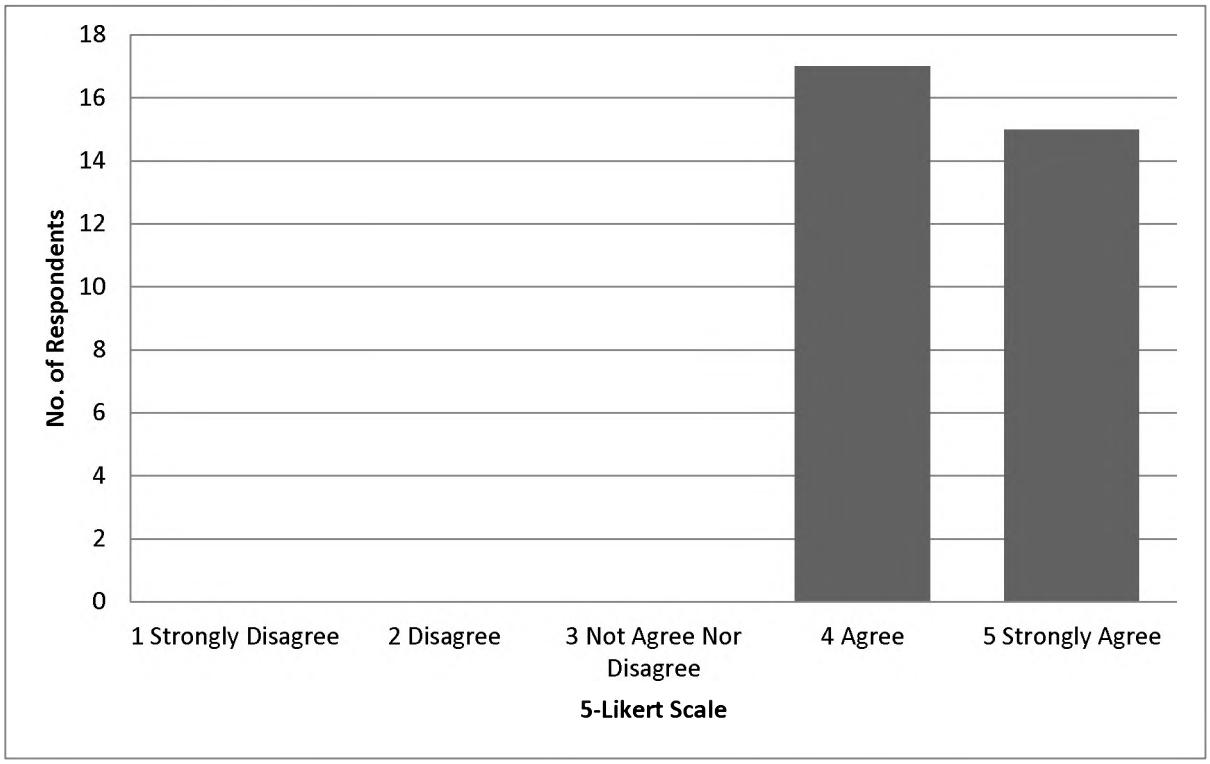

Figure 4.5: Online Business Respondents

The data collected from the small and medium enterprises (SMEs) based on different sectors. So, from all respondents those responses who belongs to the "Online Businesses" are shown in the graph above, which indicating that out of approximately 400 SMEs, Thirty Two (32) SMEs are belongs to online businesses and out of Thirty Two (32) respondents Seventeen (17) respondents choose (4=Agree), and Fifteen (15) respondents choose (5=Strongly Agree), which shows that due to Covid-19 the shifting towards online business increases the growth of SMEs and the occurrence of Covid-19 affect the development of all those small and medium enterprises (SMEs) positively.

Table 4.7: Comparison of Factors (Before and After Covid-19)

Variables	Before Covid-19 (β)	After Covid-19 (β)	Decision
Marketing	0.064 (Significant)	0.215 (Significant)	Positively>Increased (Significant)
Technology	-0.067 (Significant)	0.233 (Significant)	Positively>Increased (Significant)
Finance	0.636 (Significant)	0.189 (Significant)	Positively>Decreased (Significant)
Managerial Skills	0.317 (Significant)	0.128 (Significant)	Positively>Decreased (Significant)
Government Support	-0.006 (Insignificant)	0.151 (Significant)	Positively>Increased (Significant)
Education	0.048 (Significant)	0.109 (Significant)	Positively>Increased (Significant)

The above table shows the comparison of the different factors that affecting the development of SMEs before and after covid-19 in Pakistan. In this comparison the study found that the affecting ratio of most of the factors (Marketing, Technology, Government Support & Education) positively increases, but two (Finance & Managerial Skills) of them positively decrease. As per table, and the results of the study one of the most affecting factors is "Technology" that was negatively affecting to the growth of SMEs before Covid-19. The reason behind its negative-significancy is that our country Pakistan was not the technology oriented country before Covid-19 that's why the "Technology" shows negative relationship. The reason behind negative sign is that before covid-19 those small and medium enterprises (SMEs) who used "Technology" besides getting benefit from that technology, they were getting loss from that technology in shape of; depreciation cost, and due to heavy load shedding the cost of running that technology in shape of fuel cost in generator or UPS cost.

But, after Covid-19 the variable "Technology" plays a positively significant role in the enlargement of the SMEs in Pakistan. The result of the study shows that the variable "Technology" disturbing the enlargement of the SMEs by approximately 23%. It shows that the effectiveness of variable "Technology" increases in disturbing the enlargement of SMEs after Covid-19 and it is also an indicator for the owners of the SMEs that they have to more focus on "Technology", as they were focusing before Covid-19 on Technology. The reason behind the significant relationship of Technology after Covid-19 is that after Covid-19 the load shedding become decreases which decreases the cost of running the technology and during Covid-19 little bit support from the government to SMEs is also one of the reason of the significant relationship of Technology. The common reason is this as we all know that those small and medium enterprises (SMEs) that are technology oriented using more technology gets less affected from Covid-19.

The second most affecting variable in the table is "Marketing". In table it shows that before Covid-19 the variable 'Marketing" was disturbing the development of the SMEs with the percentage of 6.4%. But, after Covid-19 the affecting ratio of the variable "Marketing" in the development of the SMEs shifted to 21.5%. The reason behind its significant jump is that; before Covid-19 people were not that much using the social media platforms and the small and medium enterprises (SMEs) mostly have to advertise their product via printed advertisement or those who can afford and economically well SMEs used the platform of Media, TV Channels, which wasn't in the affordability of all the small and medium enterprises (SMEs). But, with respect to time we saw that the entire world shifting and using the social media platforms like face book, YouTube, twitters etc., and these platforms are easily accessible to anyone. So, after Covid-19 the "Marketing" of the products of the SMEs becomes easy and the circle of watching the advertisement of the SMEs also increases because of social media that becomes one of the main reasons of the significancy of the

variable "Marketing" that increases the affecting percentage of "Marketing" in the development of SMEs.

The third variable shown in the table is "Finance". Before Covid-19 the variable "Finance" was disturbing the growth of SMEs positively and significantly by the highly percentage of 63.6%. It means that more than half of the growth of SMEs was disturbing by the "Finance" before Covid-19. After Covid-19 the effectiveness of the variable "Finance" becomes less but significant and still the variable "Finance" affecting the growth of SMEs significantly and positively but the contribution of the variable "Finance" in the growth of SMEs becomes decreases to approximately 19%. It shows that "Finance" does matter after Covid-19 in the development of SMEs, but the contribution of other factors in the development of SMEs after the occurrence of Covid-19 decreases the contribution percentage of "Finance" in the development of SMEs in Pakistan.

The fourth variable shown in the table is "Government Support". Before Covid-19 the variable "Government Support" was negatively and insignificantly related with the development of the SMEs. Because the Pakistani government does not provide considerable support to SMEs before Covid-19 and even if any backing provided by the Pakistani government to SMEs that relief may not be given that much enough that helps businesses to be confronted with low demand for an extended period of time small businesses in Pakistan have had a poor track record of obtaining such tax breaks in the past, partially because many of them do not use official banking channels for their needs or because banks demand high collateral requirements. In addition, considerable percentages of micro enterprises operate entirely or partially in the informal sector (Ahmed, 2020). So, that's why the results show insignificant and negative relationship before Covid-19 because any support from government was not going in the favor of the SMEs because of the improper policies of the

government of Pakistan related to the SMEs. After Covid-19 the results of the study related variable "Government Support" show a positive and significant relationship. The variable "Government Support" is affecting the development of the small and medium enterprises (SMED) after Covid-19 by the percentage of approximately 15%. It shows that there is some kind of support (relief packages in during Covid-19, relief in SME Policy 2021) started from the government of the Pakistan. But, still there is need to increase in this support and make some policies that could be supportive for flourishing the development of SMEs. Recently, government of Pakistan announced that the government is going to issue loans of 10M Pakistani rupees to each SME @ of 9% interest rate but it will be collateral free loan. But, the question is whether this loan will increase the sale of each SME? So, there is need to make some policies that will flourish the sales of the SMEs then all other things will works for the small and medium enterprises (SMEs) otherwise only providing loan to the SMEs on low interest rate will not enough to support the SMEs.

The fifth variable shown in the table is "Managerial Skills". Before Covid-19 the variable "Managerial Skills" was affecting the development of the SMEs positively & significantly, with the percentage of approximately 32%. But, after Covid-19 the affecting percentage of the variable "Managerial Skills" decreases to approximately 13%. It shows that the affecting percentage of the variable "Managerial Skills" decreases with the percentage of 19%. It shows that after Covid-19 the effectiveness of the variable "Managerial Skills" decreases. So, it is a sign for the owner of the SMEs to continue their focus on the "Managerial Skills" to improve the economic condition of their enterprises but, mostly on those factors that affecting the development of SMEs more as compare to the factor "Managerial Skills". Because, "Managerial Skills" affecting the development of SMEs with slightly low significant percentage as compare to the other factors.

The sixth variable shown in the table is "Education". First of all just clear about the Education's definition that what kind of education is it? It's about the Formal Education of the employees. Formal Education means Education related to your field/work is known as formal education. So, the outcomes of the study show that before Covid-19 the variable "Education" was positively and significantly related with the development of the small and medium enterprises (SMEs) in Pakistan. The result of the study shows that the variable "Education" affecting the development of the SMEs by the percentage of 05%. But, after Covid-19 the result of the study shows that the variable "Education" becomes more important and it's affecting percentage increases from 5% to 11%. It means that after Covid-19 the variable "Education" is affecting the development of the SMEs with the percentage of approximately 11%. It shows that "Education" after Covid-19 is also playing a significant role in the development of the SMEs in Pakistan. As we all know that formal education is an important thing but during the survey few respondents of the questionnaires said that if there is complete shutdown then what should the education will do? So, behind the low significant percentage of the variable "Education" another reason according to the respondents is that, if there is complete lockdown then what should education can do to support the development of the SMEs? So, due to these reasons the affecting percentage of Education is low as compare to the other factors.

So, by comparing the results of the study it is found that the owners of the SMEs have to increase their focus on these top three most affecting factors "Technology, Marketing and Finance". Also on those factors (Income, Supply and Online Business), that comes into existence after the occurrence of Covid-19.

The answer of the research question of the study is that most of the factors shows significant impact on the development of the SMEs and factors affecting the development of

the SMEs before and after Covid-19 are little bit changed with their affecting percentage. It means that the affecting percentage of few variables increases after Covid-19 and of few variables decreases but remain significant. Government Support is the only variable which shows insignificant relationship before Covid-19 but after Covid-19 it's also affecting significantly to the development of the SMEs.

After Covid-19 the three variables (Income, Supply and Online Business) that makes after the suggestions of the respondents shows different impact on the development of small and medium enterprises (SMED). Income and Online Business shows positively and significantly with the development of the small and medium enterprises (SMED). But, the third variable Supply (SUP) shows insignificant relationship with the development of small and medium enterprises (SMED) because as per respondents the supply didn't get that much affected during Covid-19. So, the overview of the post Covid-19 variables suggested by the respondents shows that out of three variables two shows significant and one show insignificant relationship with the development of the small and medium enterprises (SMED).

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1.Introduction

In this chapter the study will try to conclude all its findings and also try to give some recommendations and policy implications to the concern ministry (SMEDA) and to the government of Pakistan that will help the policy makers in making policies that helps to the owners of the SMEs and flourish the development of the SMEs.

5.2.Conclusion

The small and medium enterprises (SMEs) are engine of growth for the developing economies like Pakistan. The SMEs contribute to the employment generation that leads to the poverty alleviation. The study examined that the factors affecting the development of SMEs before Covid-19 positively and significantly are Finance, Managerial Skills, and Marketing, Education. The variable Technology effects the development of SMEs negatively and significantly before Covid-19. The reason behind its negative relationship is load shedding because as informed by the respondents during the collection of data that due to load shedding the maintenance cost of Technology increases and its benefit decrease. Before Covid-19 the variable Government Support shows insignificant relationship because as per respondents before Covid-19 there is no significant support provided by the government to the SMEs.

After Covid-19 when lockdown imposes in the Pakistan after the occurrence of first wave of Covid-19 the SMEs get badly affected. Because of lockdown everything gets closed and most of the small enterprises which don't have sufficient amount of finance for the long

term support moves towards the shutdown condition. The findings of the study (after Covid-19) show that, Technology, Marketing, Finance, Government Support, Managerial Skills, Education and Income affecting the development of SMEs positively and significantly. The factor Supply shows the insignificant relationship with the development of SMEs. Because, during interviews respondents said that supply does get affected but not completely get closed. So, they didn't think that it's affected that much as other factors affected the development of the SMEs. So, it is concluded that most of the variables affecting positively significantly to the development of the SMEs before and after Covid-19 and those factors which comes into existence after the occurrence of the Covid-19 also affecting the development of SMEs rather than one factor (Supply) as it shows insignificant relationship with the SMED. It is also concluded that almost same factors affecting the development of the SMEs but the affecting percentage of the variables change their rank of most affecting variables. Such as, technology was negatively affecting the SMED before Covid-19 but after Covid-19 it's affecting positively with the highest percentage. So, the findings of the study show that rather than Supply all other factors affecting the development of the SMEs.

5.3.Recommendations &Policy Implications

i. The recommendations of this study will be useful for the government, management of small and medium enterprises (SMEs) and for stakeholders as well.

ii. The before Covid-19 result of the study shows that out of six variables (MKT, TEC, FIN, MS, GOV and EDU) four variables (MKT, FIN, MS and EDU) shows the positively significant relationship with the development of the small and medium enterprises.

iii. While one variable (TEC) shows negatively significant relationship because while collecting the data the respondents informed that because of too much load shedding

the maintenance cost of Technology increases and benefit decreases. One variable (GOV) shows negatively insignificant relationship with SMED because as per respondents before Covid-19 there is no significant support provided by the government to the SMEs.

iv. The after Covid-19 result of the study shows that out of nine variables (MKT, TEC, FIN, MS, GOV, EDU, INC, SUP and ONB) seven variables (MKT, TEC, FIN, MS, GOV, EDU and INC) show the positively significant relationship with the development of the small and medium enterprises.

v. While one variable (SUP) shows positively insignificant relationship with the SMED. Because, during interviews respondents said that supply does get affected but not completely get closed. So, supply didn't affect much as other factors did. While one variable (ONB) measures demographically which also shows the positive relationship with the SMED because during Covid-19 those SMEs which were working online didn't get that much affected as other SMEs affected

vi. By comparing the results of before and after Covid-19 it is found that there are two main factors which are affecting the development of SMEs before Covid-19 one is Finance and other is Managerial Skills. While after Covid-19 there are three main factors Technology, Marketing and Finance.

vii. The results of the study recommended that the owner of the SMEs must have to increase their focus on these three factors Technology, Marketing and Finance.

viii. The government and the regulatory authorities of SMEs have to make policies in which they support SMEs especially in these (TEC, MKT, FIN) three factors.

ix. The government of Pakistan and regulatory authorities of SMEs has to make some policies that help the SMEs to move towards more use of Technology that will

increase their output that will help to increase the income of the SMEs and increase in income of the SMEs will flourish the economy of Pakistan as well.

x. It is also recommended that regulatory authorities of the SMEs must have to conduct workshops on how to work online? & How to work in the pandemics like Covid-19 for survival of the business? Because, as we saw in Covid-19 that those SMEs which were working online didn't get affected as compare to other SMEs.

xi. The government has to provide some financial schemes (ease in taxes, interest free loans) that will support the SMEs and will help them to recover from there loss that has been done in Covid-19.

xii. Furthermore, after discussion with the professionals of SMEDA &reviewing the SME Policy published in the newsletter of SMEDA (Oct-Dec, 2021; Vol. 16, Issue.04)it is found that almost 78% SMEs are not able to get benefit from the schemes issued by the SMEDA. So, it is important to motivate SMEs to get registered for the betterment of SMEs and economy as well.

xiii. The small and medium enterprises development authorities (SMEDA) should give more awareness to the owners of the SMEs using advertisements on social media, news channels etc. about SME banks. Because, 78% SMEs do not have know-how about SME banks (Newsletter of SMEDA, Oct-Dec, 2021; Vol. 16, Issue.04)

xiv. The government of Pakistan should introduce such type of rules & regulations regarding employment process in the SMEs that will not only protect the employment of SMEs workers but also restrain from the sudden decrease in employment rate in case of any disaster like Covid-19. Because, while presenting the SME policy 2021 the Ex Federal Minister of Industries and Production Makhdoom Khusro Bakhtiar said that 78% employment related with the SME sector.

xv. SMEDA should device women supportive policies and to increase the female entrepreneur ratio in Pakistan.

xvi. In last, it is recommended that government and regulatory authorities should have to open different sub offices in main areas of different cities that will help to increase the number of registered SMEs in Pakistan and will be convenient for the owners of the SMEs to visit these sub-offices in case of any issue regarding registration of the SME or else.

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Appendix A

QUESTIONNAIRE

The questionnaire is adapted from **(Abrar-Ul-Haq et al.,** 2015) and (Indarti and Langenberg, 2004):

1. **Development of SMEs: (SMED)**

Satisfaction with growth of net income:	1	2	3	4	5
Satisfaction with the time needed to reach breakeven point.	1	2	3	4	5
Consider business is successful.	1	2	3	4	5
Consider business is growing.	1	2	3	4	5
Other Factors	1	2	3	4	5

2. **Marketing: (MKT)**

Distribution channel.	1	2	3	4	5
Market Potential.	1	2	3	4	5
Searching new Market is not difficult.	1	2	3	4	5
Well Planned Marketing.	1	2	3	4	5
Other Factors	1	2	3	4	5

3. Technology: (TEC)

Existing Technology Suffices to support all production processes.	1	2	3	4	5
Existing Technology supports innovation.	1	2	3	4	5
Existing technologies easily maintainable	1	2	3	4	5
New Technology to support innovativeness in the business is attainable	1	2	3	4	5
Adoption of new technology increases output.	1	2	3	4	5
Other Factors	1	2	3	4	5

4. Finance: (FIN)

Existing Capital is sufficient to maintain the business.	1	2	3	4	5
Existing Capital is sufficient to expand the business.	1	2	3	4	5
Can additional capital easy to get	1	2	3	4	5
Have accessible alternatives of capital sources if needed.	1	2	3	4	5
Other Factors	1	2	3	4	5

5. Managerial Skills: (MS)

Managerial Skills are important for running a successful business.	1	2	3	4	5
Have good leadership skills.	1	2	3	4	5
Have good communication skills	1	2	3	4	5
Decision making skills are very important for the success of business.	1	2	3	4	5
Other Factors	1	2	3	4	5

6. Government Support: (GOV)

Support of Government is satisfactory.	1	2	3	4	5
Got business permit easily.	1	2	3	4	5
Have no problems when contact with government.	1	2	3	4	5
Does government policies affect your business positively?	1	2	3	4	5
Other Factors	1	2	3	4	5

7. Education: (EDU)

Does formal education is essential for development of business.	1	2	3	4	5
Does formal education helps in taking good decisions.	1	2	3	4	5
Does formal education improves understanding of business.	1	2	3	4	5
Other Factors	1	2	3	4	5

8. Other Factors:(Income)

Decrease in Sales	1	2	3	4	5
Decrease in Consumer purchasing power	1	2	3	4	5
Inflation	1	2	3	4	5
Unavailability of Goods for sale due to lockdown	1	2	3	4	5

9. Other Factors:(Supply)

Decrease in Supply of Goods	1	2	3	4	5
No Access to Transport due to lockdown	1	2	3	4	5
Decrease in Demand by consumers	1	2	3	4	5
Unavailability of Raw Material	1	2	3	4	5

10. Other Factors:(Online Businesses)

Growing business gradually	1	2	3	4	5
Increase in Sales	1	2	3	4	5
Online Shifts due to Covid affect positively	1	2	3	4	5
Government Policy of allowing online business affect positively	1	2	3	4	5

Appendix B

The wave wise detail of the Covid-19 cases is given below:

Table 5.1: Wave wise Covid-19 Cases Detail

WAVE #	DURATION OF THE WAVE	NO. OF CASES IN THE WAVE
WAVE # 1	MAR-2020 TO AUG-2020	2,92,709
WAVE # 2	SEP-2020 TO FEB-2021	2,80,288
WAVE # 3	MAR-2021 TO JUN-2021	3,82,288
WAVE # 4	JUL-2021 TO OCT-2021	3,11,260

DATA SOURCE: https://covid19.who.int/region/emro/country/pk

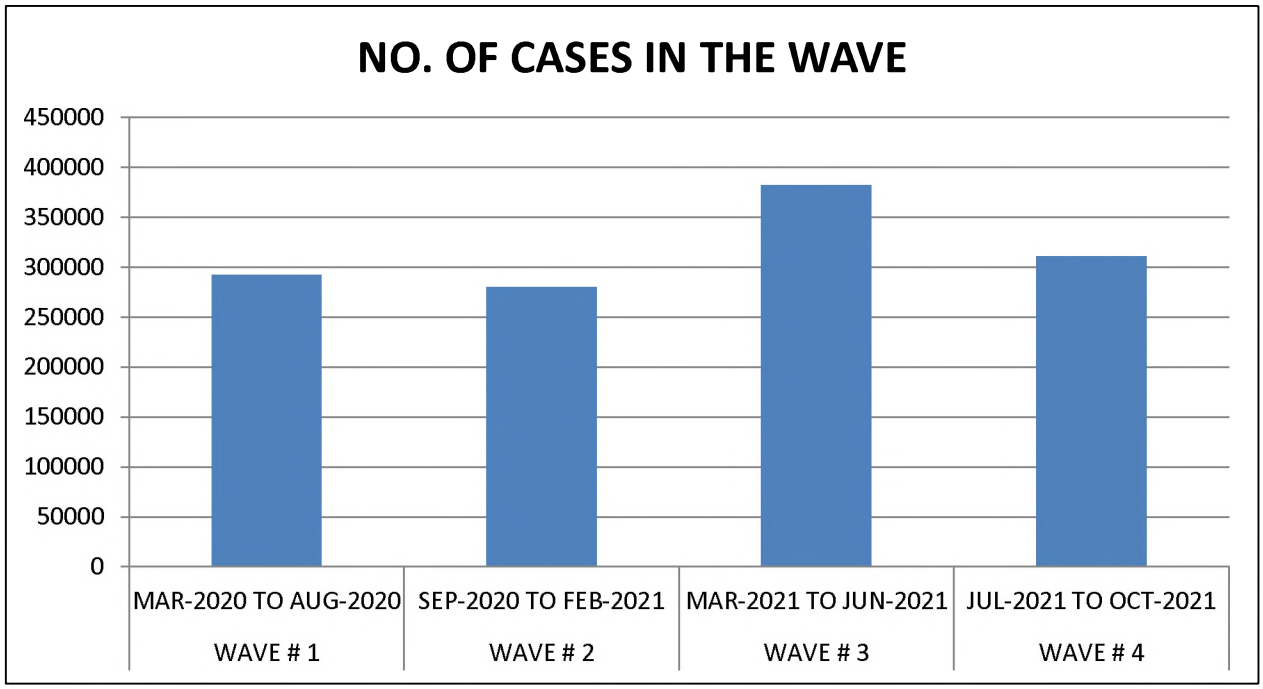

Figure 5.1: Wave wise Covid-19 Cases Detail