Impact of Private sector Credit on Small and Medium Enterprises' Performance in SAARC Countries.

Thesis

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CERTIFICATE

This is to certify that this thesis entitled: **"Impact of Private Sector Credit on Small and Medium enterprises' Performance in SAARC countries"** submitted by Mr. Muhammad Shahir Yar Khalid is accepted in its present form by the Department of Business Studies, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree of **MBA**.

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DEDICATION

I dedicate my thesis work to my family and many friends. A special feeling of gratitude to my loving parents, Khalid Mehmood and Samina Khalid whose words of encouragement and push for tenacity help me to complete this thesis. My brothers Bilal, Ibrar and sisters Farrah, Saima and Maryam have never left my side and are very special.

I also dedicate this Thesis to my friends who have supported me throughout the process. I will always appreciate all they have done, especially Muhamad Umar Shinwari, Nadir Shabir, Adnan Tahir, Aqib Rasool, Syed Rahim, and Wasia Masroor for helping me develop my conceptual and technology skills. I also give special thanks to my mentor Dr. Nasir Iqbal for being there for me throughout the entire project.

DECLARATION

I, Muhammad Shahir Yar Khalid, solemnly declare that this is an original piece of my work. I'm the sole author of this thesis and during the period of the registered study this work has not been submitted for an award of a degree in any other University.

Muhammad Shahir Yar Khalid

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Abstract

Small and medium enterprises (SMEs) play an essential role in the economic success of a country. The main objective for the establishment of the South Asian Association of Regional Cooperation (SAARC) was to improve the economic conditions of this region collectively. In the 18th SAARC Summit, it was announced that Small and medium enterprises will be given special attention and SAARC countries would attempt their best to enhance small and medium enterprises performance. However due to lack of access to finance and policy bias from governments and institutions the SME sector was unable to achieve its true potential in SAARC region. The following study examines the impact of private sector credit on SMEs performance in SAARC countries because it is considered as an immediate remedy to enhance Small and medium enterprises. SME contribution to GDP has been used as a proxy variable for measuring the SMEs performance in the SAARC region. Private sector credit is measured by the total private loans made to the private sector in SAARC countries. The panel dataset for the time period of 1990 to 2018 was developed. In order to observe and analyse the data the fixed effect method (FEM) and multiple regression equation techniques was used. For empirical analysis multiple regression equations were developed for each country. The results have revealed a positive and significant relationship between private sector credit and SMEs performance in SAARC countries. This study will contribute to the existing literature by equipping policy makers about the ingredients and constraints faced by SMEs in South Asian region. In the light of this study policy makers can shift their policies to ensure that SME sector in their respective country has an adequate access to finance and consequently contribute to the development of SAARC region.

Keywords: Private Sector Credit, Small and Medium Enterprises' Performance, Interest rate, Trade Openness, Foreign Direct Investment, SAARC, South Asia

1. Introduction

1.1 Background

The main objective of creating SAARC was to create collaborative efforts in the economic and social sectors to improve the quality of life for its people, but statistics show that economic cooperation between countries has declined due to some political differences. Thus, such countries were unable to deliver basic welfare to their lower class (Adhikary & Sinha, 2019). A significant portion of research suggests that the most effective approach to enhance economic growth in developing countries could be the promotion of SMEs, which have been largely ignored in the previous years. (A. Ullah, Khushnood, & Khan, 2019)

The Small and medium enterprises is an important sector that reduce unemployment and improves people's economic conditions (Zafar & Mustafa, 2017). It is recognized globally as an instrument for achieving economic growth and development as well as for creating jobs (Inyang & Enuoh, 2009). A considerable proportion of the population of SAARC countries earn their daily wages from self-employment or services. Therefore, a rise in the growth of SMEs will help this poor population to earn more wages because of increased commercial activities.

Western developed nations and Asian tigers like Japan, Malaysia and Singapore attribute much of their success to their vibrant SME sector (Kader, Mohamad, & Ibrahim, 2009). SMEs are very quick to start, need comparatively less money, produce goods that fulfil local demands, create more jobs and increase export earnings. According to a study by Thurik and Wennekers (2004) small and medium enterprises contributes greatly to the business economies' by originating business ideas and generating innovations as a marketing tool to enhance their profit (Thurik & Wennekers, 2004).

Despite multidimensional role of the SMEs in the country's economic development, their average contribution to the total GDP in SAARC countries is 11.79 per cent (World Bank, 2018). SAARC Regions' growth in the SME sector has remained quite stagnant because of policy bias of the government and institutions. Consequently, a substantial number of SMEs are engaged in conventional businesses, due to lack of access to infrastructure and technology, these SME's have poor productivity levels and virtually sub-standard products. Therefore, there is a major need to restore this sector (Manzoor, Wei, Nurunnabi, & Abdul Subhan, 2019).

Globally, Lack of private credit is seen as a major constraint to growth for SMEs. A large number of SMEs around the world are citing the lack of credit as an impediment toward their growth (World Bank report, 2018). An effective financial system and access to finance are keys to economic development and growth (Lee, Sameen, & Cowling, 2015). Limited access to finance can severely constrain the performance of small and medium enterprises. Therefore, investigation of financing channels of SME sector is essential.

Among many financial constraints faced by the SMEs the most common constraint recognized by many entrepreneurs is bank credit channel. A majority of SMEs in SAARC region use bank loans as the main source of external capital (Badruddoza, 2011). The influence of bank credit on the performance of the SMEs sector remained noticeably silent in the literature. Therefore, it is important to focus on the role of bank credit to SME's performance in SAARC region.

In order to study impact of private sector credit on SMEs performance in SAARC region, distinction between the various financial channels is needed. Bank Credit channel is the most important medium of credit transmission and it applies to the borrowing of SMEs and private sector of the market from commercial banks (Wong, Lu, Tjosvold, & Yang, 2016). Consequently, the main focus of this study will remain solely concentrated on the bank sector credit to SMEs and their impact on the performance of SMEs in the SAARC countries.

1.2 Motivation of the study

Although various studies have been undertaken around the world at national and regional level to examine the role of SMEs in development and their financing channels (Hque, 2017; Manzoor et al., 2019; A. Ullah et al., 2019) these studies were unable to explain the role of private sector credit on manufacturing SME sector in South Asia. Moreover, as SAARC region adopted sustainable development goals (SDGs) of 2015 and prepare to join hands with developed nations to achieve sustainable development (UNESCAP report 2018). There is a dire need to study the factor contributing to the growth of SMEs in South Asia, which in turn will influence the region's economic development. Therefore, this study evaluates in particular the impact of private sector credit on SMEs performance in South Asia and its relation to economic development in South Asian region.

1.3 Problem statement

It is evident by numerous studies that SMEs play a significant role in the economy success of a country yet the SMEs in south Asia lack sufficient financing and proper capital resources in order to perform their daily operation which results in the lower productivity and performance of the firms. Increase access to finance and lower interest rate is known to enhance the performance of firms remarkably. Therefore in this study we attempt to explore the relationship between private sector credit and SMEs performance in SAARC countries and how the availability of bank credit can affect the firm performance.

1.4 Research question

The research question of the study are

1. Does private sector credit has an impact on SMEs performance?

2. Does Increased credit to SMEs enhanced their growth?

3. What variables other than Private sector credit can affect the performance of a firm?

1.5 Objectives of the study

The primary objectives of the study are:

1. To examine the role of small and medium enterprises in economic development of SAARC countries.

2. To investigate the financial channels and various constraints faced by small and medium enterprises in South Asia.

3. To explore whether Private sector credit has an impact on SME performance in South Asia.

4. To help the policy makers of SAARC to shape the policies made in credit system of their respective countries in order to maximize the process of SME growth.

1.6 Contribution of the study

This study attempts to explore the Impact of private sector credit on SMEs performance in South Asia. In the case of South Asia, there is almost no literature on this subject and similar is the case with the availability of data. The literature and previous research on SMEs in South Asia is insufficient for policy making (Wellalage & Locke, 2017). It is therefore highly important to resolve the challenges of SMEs and provide guidance to create successful policies

1.7 Significance of the study

This study attempts to explore the Impact of private sector credit on SMEs performance in South Asia. It is highly important to resolve the challenges of SMEs and provide guidance to create successful policies. Therefore, investigation of the impact of private sector credit on SME performance will add to the current literature and contributes to the significance of the study.

1.8 Delimitations of the study

This study will only focus on the bank credit given to SMEs as a loan for their business endeavour. The performance of the SMEs will be measured by the total output of manufacturing sector of the SMEs in South Asian countries. The study will take data of 1990 to 2019 as the previous data was not available. The study will only take into account the SMEs of South Asian countries namely (Pakistan, India, Bangladesh, Sri lanka, Bhutan, Nepal, Maldives and Afghanistan).

1.9 Organization of the study

The first chapter begins with a brief introduction of SMEs sector in SAARC Region. The second chapters cover the literature review and theoretical framework of the thesis which analyse the role of SMEs as an important sector to contribute in the economic development and employment in both the developed and SAARC countries. The third chapters provide an overview of methodology and description of variables which are used to measure the performance of SMEs in SAARC region. The research question is empirically answered in the 4 chapter which reveals the test results and verify the hypotheses results. The last chapter is devoted to the conclusion and recommendations for SMEs growth in SAARC region.

2. Literature Review and Theoretical Framework

2.1 Theoretical Framework

Firstly, we will explain theories which are related to this research work and then will explain our variables.

2.1.1 Monetary Policy Theory

Monetary policy is one of the means to enhance SMEs performance. According to theory of macroeconomics, monetary policy can influence the performance of Small and medium enterprises through interest rate which may alter the cost of borrowing and production in the productive sector (Friedman, 1995). (Storey, 2006). (Onyeiwu, 2012).

(Schwartz & Bordo, 1963) Recent research has empirically confirmed the findings of Schwartz and Bordo that changes in interest rates due to monetary policy can bring about variations in the output of Small and Medium enterprises (Ferrando et al., 2019). Recent study proposes a substantial relationship between monetary policy and loan supply. If monetary policy is contractionary, banks will increase the financial premium and decrease the amount of credit they are willing to provide. Banks tend to make comparatively more secure loans during times of tightened monetary policy (Cahn, Duquerroy, & Mullins, 2017). Consequently, contractionary monetary policy will increase the financial cost of lending of banks and borrowers. This effect is usually negatively related to smaller firms and may cause banks to re-direct their credit supply towards large firms.

According to a study by (Black & Rosen, 2011) high interest rate may drive banks to shift their credit from small firms to large firms which are less risky during times of contractionary monetary policy. Alternatively, expansionary monetary policy can remove the credit problems of the small and medium enterprises. A study by (Fernández & Gulan, 2015) underlined that a

rise in the market interest rate results in a decrease in business investment not only because of higher capital costs but also because of lower credit supplies to small and medium enterprises.

2.1.2   Theory of Credit Risk and Firm Growth

Relevant theory on the process of small and medium enterprises growth remains undeveloped. A study by (Lewis & Churchill, 1983) highlighted that Any enterprise experiencing growth will go through a growth-stage process. This approach is similar to the product lifecycle, starting with creation, then maturity and finally decline and death. A study by (McMahon, 1998) presented a four stage growth model which contains start-up, development, maturity, diversification and decline.

The financial life cycle theory model was developed in the finance literature similar to the growth stage model (Weston & Brigham, 1978). It explains different growth stages of the firm and the financial problems that may arise along each stage. SMEs have a difficulty to access formal credit initially and a significant source of their finance is internally generated revenues or gifts from family and friends. (F. Ullah & Taylor, 2007). These informal channels are the key investment sources for the start-up companies (Bygrave & Quill, 2007).

In order to secure business debt personal assets of a firms owners' are often used as a collateral (Basu & Parker, 2001). However as SMEs become successful and mature through growth stages, external financing particularly bank finance becomes relatively less difficult (Berger & Udell, 2006). Results from a recent study confirm the support private sector credit have during growth life cycle. Mac and Bhaird conclude that funding SMEs cannot be included in a universally applicable 'one size fits all' model. (Mac an Bhaird & Lucey, 2011)

2.1.3 The Theory of International Trade

According to the theory of Industrial Organisation and International Trade, FDI can have both positive and negative impact on a host country (Borensztein, De Gregorio, & Lee, 1998). In Horizontal FDI a firm duplicate its home activities in a host country and offers products to its local market. thereby avoiding transportation cost. Vertical FDI may be used as a cost reducing substitute for purchasing cheap raw material, locating each stage of a firm's production in the country where it can be produced at the least cost (Subair & Salihu, 2011).

It is well known from the theory of FDI that for FDI to take place, the multinational enterprise (MNE) needs to have some firm unique advantages over the enterprises in the host economy. The entrance of large international enterprises may affect local businesses (Orji, Anthony-Orji, Nchege, & Okafor, 2015). MNCs can produce goods at a lower cost since they bring along some technical knowledge which is product specific. Furthermore, they have higher marketing and managerial skills and low production costs which enable them to reduce their marginal costs. Therefore, FDI drive out local businesses that cannot compete with its lower prices and decrease the performance of SMEs (Konings, 2001). Atiken and Harrison (1999) criticize MNCs for decreasing the productivity of SMEs through competition effects (Aitken & Harrison, 1999).

Recent studies have suggested that FDI have a positive impact on developed countries whereas FDI have a negative impact on developing countries (Beugelsdijk, Smeets, & Zwinkels, 2008). In the case of profit repatriation, the primary concern is that firms will not reinvest profits back into the host country. This leads to large capital outflows from the host country. Excessive FDI inflows into a country can have either positive or negative effects on the economy. FDI can affect labour and capital markets, trade patterns and economic development (Görg & Greenaway, 2004) .

2.1.4 Trade off Theory

According to trade-off theory, Small and Medium enterprises seek optimal credit portfolio. The trade-off theory advocates that an enterprise may decides between How much debt financing and how much equity financing to use through cost-benefit analysis (Modigliani & Miller, 1958). A balance exists between debt cost (bankruptcy) and debt gains (tax savings) (Serrasqueiro & Caetano, 2015) . There is an advantage to finance with debt. Equity financing is initially expensive than debt financing than because debt payments for a company are tax-deductible and there is less risk in debt than equity. But rising the debt also raises a company's risk (De Jong, Verbeek, & Verwijmeren, 2011)

The marginal benefits of taking debt decreases as debt increases, on the other hand the marginal cost increases. A firm which is improving its worth will remain focused on how much debt or equity to use for financing (De Jong et al., 2011). A review of the literature provided by (Ghazouani, 2013) states that firms gradually adjust to the debt target ratio. The benefits and costs of debt force a firm which are above the target debt ratio to decrease their debt and firms below the target debt ratio increase their debt (Ghazouani, 2013). Thus, debt ratio keeps a check on a firm financial performance and works as a force to push the firm toward its targeted goals.

2.2 Empirical Review

Definitions of SMEs vary across countries, the World Bank declares SMEs as: "Those businesses which have at least 300 employees, $15 million in annual revenues and $15 million in assets. Most countries define small and medium enterprises using employment, capital investment and sales volume (Beck et al., 2005). In Pakistan a company having a paid-up capital up to 152000$ US dollars, having an employment up to 250 employees and having an annual sale of up to of 0-1.52 million US dollars is considered a Small and medium enterprise (SMEDA Pakistan). In Bangladesh a company having an investment of up to 3.6 million US

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dollars and having a full-time employment of up to 250 employees is considered a small and medium enterprise (National Industrial Policy Order 2010).

In India a company having an initial investment of almost 1.32 million US dollars and having a full-time employment of up to 250 employees is considered an SME (MSMED Act 2006). In Sri Lanka those enterprises are considered SMEs which employ below 300 employees and hold annual turnover less than 4.1 million US dollars. (Sri Lanka policy framework for SME Development). Industrial policy 2010 of Nepal uses just capital for SME definition and an enterprise having an investment up to 1.5 million US Dollars is considered small and Medium enterprise in Nepal. In Maldives a company having an investment of up to 1.29 million US dollars and having a full-time employment of up to 1000 employees is considered an SME (Ministry of economic development Maldives). In Bhutan a company having an investment of up to 1.32million US dollars, having an employment of up to 99 employees is considered Small and medium enterprise (Ministry of economic affair Bhutan).

2.2.1 SMEs and Economic Growth

Small and medium enterprises are recognized as the heart of economic growth and development (Robu, 2013). SMEs play an incredibly critical part in the development of a society because not only they provide ample work opportunities to the various class of society but also ensure the flow of capital across the various levels of society (Kumar & Sharma, 2015). SME 's contributes 50% of total employment and over 60% of GDP in high-income countries. Informal enterprises and SMEs account for more than 55% of GDP and more than 65% of total jobs in poor countries, additionally in middle-income countries they account for more than 90% of overall jobs and about 65% of GDP (Zafar & Mustafa, 2017). SMEs not only have an impact on GDP, but also help to advance the living conditions of people in developing countries by creating more economic opportunities.

A recent study discussed the impact of SMEs on the development of Asian countries. The study utilized times series data over period of 2008–2015 to observe the impact of SME's development on GDP, FDI and employment (Sanusi & Hamza, 2017). The study discovered that the impact of SMEs on employment and GDP is significant and positive, and it has a negative impact on FDI. The study also emphasized the interrelationship between SMEs and the economy. Economic development ensures more SMEs are created which in turn will boost the economy (Sanusi & Hamza, 2017).

SMEs make up almost 90% of the private sector in the Netherlands, and contribute 35% to GDP and provide 50 % of the workforce with employment (Kraus, Rigtering, Hughes, & Hosman, 2012). SMEs contribute 37 million dollars in exports and build 22 million jobs in Italy (Govori, 2013). while in Indonesian SMEs add 42.4 million and contribute to 56.7 percent of GDP (Cahyadin, 2017). The SMEs account for a large number of overall business activity in almost every country. Large companies expect the SMEs to compete, because they originated from them. SMEs create job opportunity for most of the people for the first time and facilitate their venture towards entrepreneurship in the economy (Donckels & Miettinen, 2019)

In UK SMEs provide 59 per cent of the total population with jobs and make up 99 per cent of the total businesses (Cowling, Liu, & Zhang, 2016). Nearly 80 per cent of employment in Japan and South Korea is based on SMEs (Yoshino & Taghizadeh-Hesary, 2018) is based on SMEs.. In the European Union, SMEs make up 85 % of the total enterprise and employ almost 65 million people (Kader et al., 2009). Almost 85 per cent of SMEs are improving the employment rate in both developed and developing economies. Indeed, small and medium enterprises continue to grow and create more job, when large companies downsize and cut jobs.

SMEs are responsible for the creation of new jobs. Small and medium enterprises can create jobs cheaply if compared to large enterprises. SMEs can deliver the products and services

cheaply if compared to large enterprises (Robu, 2013). More than 90% of enterprises around the world are SMEs which have employed almost 60-70% of workforce (OECD). Around 0.88 million SMEs are existing in the developing world. In Japan and China 60% of the addition to GDP is contributed by SMEs, whereas in the USA this percentage raises to 64%, and in the EU SMEs generate 55% of GDP (The Steering Group, 2011).

2.2.2 SMEs in South Asia

The South Asian Association for Regional Cooperation (SAARC) is made up of eight Member States: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka established in Kathmandu Nepal to promote the well-being of South Asian people and improve their living standard. As of 2019, almost 22% of the world 's population live in the SAARC region which accounts for 3% area of the world's area, and 3.8 percent of the global economy (US$ 2.9 trillion). The Association's primary objective is to reinforce cooperation and promote mutual support in the economic, social, and scientific fields etc.

Most SAARC countries are classified as developing countries and their poor earn wages from self-employment. Therefore, it is crucial to generate more jobs for people in order to raise their income level. SMEs are the backbone of an economy, because they provide jobs for the poor (Pandya, 2012). An increase in the efficiency of SMEs could lead to higher wages for the poor employees. Literature available on SMEs in South Asia is extremely inadequate (Wellalage & Locke, 2017). Therefore, there is a great need and need to examine the factors limiting SME sector development in South Asia and the factors promoting growth.

According to a recent study by Zafar and Mustafa (2017) SMEs build jobs in the economy and make a major contribution to sustainable growth. The author used time series data to calculate the impact of the SMEs on Pakistan economy. The results confirmed a positive and significant

relationship in the country. Their study suggested that the credit constraints faced by the SME sector should be regulated by the development of appropriate financial markets in the country. To establish a stronger SME sector in Pakistan, it is necessary to simplify the lending procedure, implement credit rights and reduce credit costs for the entrepreneurs (Zafar & Mustafa, 2017) .

A study by Elagin (2019) indicates that small and medium businesses are a driver of development, resulting in higher employment, higher wages and household income The economic and social conditions in the country are chaotic due to decades of ongoing war in Afghanistan, however many aid and financial programs have been initiated to bring the country situation back to normal (Elagin, 2019). SMEs have been proven to be the most powerful means to achieve rapid economic growth and that is why the World Trade Organization (WTO), the United Nations (UN) and (SAARC) etc., and many other organizations concentrate on SME creation by ensuring convenient access to financial resources and capital according to Elagin (2019) SMEs are essential for the development in Afghanistan (Elagin, 2019).

A study by Dar et el. (2017) discusses the issues facing SMEs in Pakistan The main obstacles facing SMEs in Pakistan according to them are linked to financial constraints, lack of technology, poor infrastructure and political unrest. The study suggested that infrastructure and financial services should be developed to enhance SMEs performance in the country. According to their study the government can play a key role in removing the barriers faced by SMEs in particular by stabilizing the law and order situation and increasing educational expenditure on research institutions to improve the efficiency of SMEs (Dar, Ahmed, & Raziq, 2017).

SMEs have emerged as a thriving segment of the Indian economy, which not only provides job opportunities for the working population but also serves as a catalyst for the

industrialisation of the country's rural areas (Nagaya, 2017). SMEs have the potential to generate employment and produce quality export products at a lower cost than large-scale industries because of huge workforce in India. Despite many economic reforms the poverty situation in India is grievous (Begum & Abdin, 2015)

A study by Nagaya (2017) shows the impact SMEs have on the Indian economy. His study reveals that SMEs help in job generation and poverty reduction. In his study, he used time series data and highlighted the economic changes that occurred as a result of SME sector development (Nagaya, 2017). According to Nagaya SME sector employed nearly 58.8 million people through the creation of 26.4 million enterprises. The study further stated that the employees hired by the small and medium enterprise sector earn higher wages than the employees of other sectors and tend to consume more on household expenditure, hence SMEs are helpful for economic development (Nagaya, 2017).

SMEs form the backbone of the economy Bangladesh's economy. SMEs contribute 25 per cent of GDP and have directly employed more than 7.8 million people and created livelihoods for nearly 31.2 million people. Bangladesh's SMEs constitute up to 70 per cent non-agricultural sector employment, according to the Asian Development Bank. SMEs also contribute nearly 40 per cent of the manufacturing output. Over 6 million SMEs and micro-enterprises currently operate in Bangladesh and act as a tool for improving the lives of many. (RRP Sector Assessment, ADB). According to study by Chowdhury et el (2013), entrepreneurial and business activities are improving due to development in the small and medium enterprises sector and playing a significant role in creating employment in Bangladesh Their study stresses the government's position in strengthening the SME sector by reforming the market and legal framework for financial services (Chowdhury, Azam, & Islam, 2013)..

For any developing country such as Bangladesh, SME can lead to job creation and business activity. Chowdhury et el (2013) have emphasized that SMEs are engines of development and it is necessary for policymakers and government to play their part by taking the necessary policy measures, providing access to credit, developing technology, and adopting advanced marketing techniques for generation of employment and poverty reduction (Chowdhury et al., 2013).

Ahmed and Chowdhury (2009) highlighted that SME guarantee quick and swift industrializations in Bangladesh. Their findings highlighted government's negligence in supporting SMEs as one of the main sources for lower SME sector contribution in GDP (Ahmed & Chowdhury, 2009). They proposed that the government must play its part in shaping financial and credit systems for SMEs and establishing suitable channels of facilities to further improve the SME sector of the country.

SMEs are recognized as the bloodline to the economy of Sri Lanka. SME sector occupies almost 70 % of the total number of enterprises in the country, providing jobs to 45% of the population and contributing to 52% of GDP. A recent study by Vijayakumar et el. (2012) emphasizes the importance of SMEs in Sri Lanka's economic development. The study's findings revealed that SMEs have a significant function in the country's economic growth (Vijayakumar, Brezinova, & Marek, 2012). It creates employment and offers its employees higher salaries. It also provides labour with the skills and expertise necessary to help them earn a living. The study urged the policymakers to support SME sector through banking and credit channels and suggested that such policies will develop small enterprises to grow into medium enterprises and medium enterprises to grow into large enterprises therefore adding into the economic growth of the country.

In Bhutan, SME is the engine of socio-economic development, constituting up to 94% of the private sector. A report by Wangmo (2015) showed SMEs are a forum for local growth and development. He has highlighted the function of SMEs in job creation and poverty alleviation. The results of the study revealed that the major hurdle facing SMEs in Bhutan is the lack of government support for SMEs. He advises that Bhutan 's government should promote SME development with an aim of improving economic growth and reducing poverty (Wangmo, 2015).

SMEs, Das et el. (2018) notes, play a multidimensional part in a developing country like Nepal. It provides its workforce with employment opportunities, reduces poverty and helps create a livelihood for the unemployed (B. Das, Hui, & Sha, 2018). In addition, SMEs also provide opportunities in developing countries for young women and entrepreneurs who lack both resources and guidance. His study highlighted the need for developing countries to recognize the importance of the SME sector in a country's economic growth. The authors suggest that special attention should be given to this sector by improving all the related services, i.e. financial, administrative, and security services etc. Efforts to revive SMEs have begun earlier in Nepal but they aren't enough. The Government should make fundamental improvements for the growth of the SME sector (B. Das et al., 2018).

SMEs are recognized as a potential sector in the creation of a more resilient and diverse economy and in the creation of more employment opportunities for Maldivian citizens. The recent study by Sambajee and Dhomun (2015) highlights the challenges faced by the SMEs in Maldives. His study identified the requisite institutional and organizational reforms to restructure and integrate all development activities so that economies of scale can be accomplished in the country (Sambajee & Dhomun, 2015). In addition, their study encouraged the government to allocate more financial support for SMES development and highlighted the

responsibility of financial institutions to deliver the various services needed for SME development across sectors in the country. Given its relative value, policymakers should work to devise policies to remove financial restrictions on SMEs (Sambajee & Dhomun, 2015).

SMEs account for 90 per cent of Pakistan's private sector and employ 78 per cent of the non-agricultural workforce. According to Zafar and Mustafa (2017) there are nearly 4 million businesses in Pakistan, and 85 per cent of them are SMEs (Zafar & Mustafa, 2017). However, many small and medium enterprises have poor productivity levels and substandard goods because they lack proper infrastructure and advance technology Consequently, these SMEs only contribute smaller percentage to the manufacturing sector of GDP (SBP, 2017).

SMEs sector act as a source for generating jobs for workforce. SMEs are able to implement tactics that are more tailored to local situations than big corporations. According to (Rajput, 2011) the most suitable strategy for developing the economy is to support SMEs because of their multidimensional advantages. This approach may increase opportunities for employment, improve technology and generate income for poor labour (Nenova & Niang, 2009).

A substantial amount of research suggests that the SMEs are a medium of tax revenue in developing countries. It helps in the equal distribution of income and improves the living conditions for the masses. Because of its importance, SMEs have become a centre of discussion in the SAARC region. According to the study by Manzoor et el. (2019) SMEs play a significant role in the SAARC region's development and it has a stronger impact on the process of poverty alleviation. The study recommends formulating such policies that can ensure credit availability to SMEs, lower credit-related costs, and implement credit rights to improve SME production in SAARC region (Manzoor et al., 2019).

Ghani et el (2011) explained the factors that impede the entrepreneurial activity in SAARC countries (Ghani, Kerr, & O'Connell, 2011). According to the study, South Asia 's total entrepreneurship activity is relatively low, so countries should improve collaboration and strengthen cooperation to boost trade that can foster business conditions in this region. It is evident by their studies that SAARC countries have a potential for higher business growth, but government should play a vital role by providing financial services and guidance to the business community and implementing policies that can attract investment from both inside and outside the region (Ghani et al., 2011).

The growth of SMEs in South Asia presents some apparent and some fewer known obstacles. The main obstacles are the situation poor financial services, weak legal framework, unavailability of credit, energy shortages, labour market problems, taxation problems, lack of understanding and cooperation among various government agencies (Subhan, Mahmood, & Sattar, 2014). There is a dire need to focus on the non-material development in South Asia because technically skilled labour force may help to enhance SMEs performance in SAARC countries.

2.2.3   Financing Patterns of SMEs

Typical SMEs' financing

Small and medium enterprises commonly raise their capital from internal and external sources (Urh, 2001). The most frequently financial sources used by SMEs are:

- Capital from Equity as investment from venture capital;

- Debt capital as a form of loan for example bank loans, trade loans, leasing, factoring, and debt instruments i.e. bonds;

- Government subsidies and funds for development of SMEs;

- Development institutions, such as the WB and IBRD.

It is important to fund with both internal and external sources, because it offers business protection and a buffer against business risk. Precisely, equity capital is a critical source at the initial level, as it demonstrates the company's ability to repay its debts and solvency in the event of bankruptcy (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2018). SMEs' credit needs transform according to different stages of their development , and strong relationships with banks and suppliers have exhibited an addition of value to their overall creditworthiness (Berger & Udell, 2006).

The Financing methods differ across SMEs according to their needs and eligibility, however bank loans remain the most important source for securing external finance (B. S. Chen, Hanson, & Stein, 2017). Therefore, the main objective of our study will explore the impact of private sector credit on SMEs performance and the focus of this study will remain exclusively concentrated on Banking channel of credit for SMEs.

2.2.4 Financial Constraints of SMEs

A recent research suggests that the financing of SMEs varies greatly from the financing trends found in large companies, owing to the many particular aspects of these firms (Kraemer-Eis & Lang, 2012). SMEs have different funding requirements, depending on their stage of development and therefore a potential risk is present in their setups. Commercial banks , for example, are hesitant to offer credit to SMEs at an early stage , Because of the many complexities, information asymmetries, screening costs higher risk level (Wilson & Silva, 2013).

Considerable work has shown that, for a number of reasons, SMEs are financially more constrained than large companies. In comparison to large corporations, which can produce their funding needs by the internal reallocation of money, SMEs may depend primarily on external

financial resources (Beck et al., 2005). Information asymmetry is another potential reason as the possible expectation of risk by the investors drive them to raise the cost of lending which creates a gap between the cost of external and internal financing. Consequently, small and medium-sized enterprises may decide to rely solely on internal financing and abandon the desire for external financing; see (Dong & Men, 2014).

The business size also matters. Large enterprises have substantial tangible assets that can act as collateral. A research by hander et el (2014) identified collateral as a vehicle for increased financial market access (Hanedar, Broccardo, & Bazzana, 2014). In comparison, small and medium enterprises lack sufficient assets and collateral. SMEs therefore face the various effects of volatility in the credit market (Nedzinskas, Pundzienė, Buožiūtė-Rafanavičienė, & Pilkienė, 2013)

Almost half of SMEs around the world lack access to credit or capital investment (Lee et al., 2015). The problems confronting small and medium-enterprises are aggravated by financial restrictions. Lack of internal capital places a burden on corporations' spending decisions. In certain cases inefficient credit markets and lack of financial services drive small and medium enterprises to pursue informal funding, which raises the possible financing risk and may ultimately intensify the financial situation and hamper their sustainable development (Włodarczyk et al., 2018). This problem is more severe in developing countries where banking sector competes with informal money lenders.

The focus of the present study is on credit as an impediment towards SME growth and how availability of credit to SMEs can enhance SME sector in the SAARC region . Ayyagari (2018) Highlights that while government negligence, law and order situation and business environment have an impact on a firm's growth rate, access to credit is there most significant constraint towards SME growth (Ayyagari et al., 2018). Financial constraints are confronting

both developed and developing countries, but these constraints have a far greater impact on developing countries due to high collateral and lack of financial knowledge within financial market. Developing countries ' economic conditions can be improved by increasing access to credit for SMEs which can lead to innovation, economic stability and GDP growth (Harvie, Narjoko, & Oum, 2013).

Credit availability empowers small and medium enterprises to increase their productivity. Access to finance guarantees innovation and market growth that will further boost the competitiveness of a firm and therefore generate revenues (Dorfleitner, Utz, & Wimmer, 2013). While previous studies show that access to credit have an encouraging impact on business growth, it is usually difficult for SMEs to obtain loans as compared to larger firms. Small firms view financing as a barrier, according to Beck (2005) 22 percent more than large firms in middle-income countries that may constrain their growth (Beck et al., 2005).

The growth of a firm depends upon the access and cost of finance. Access to finance does not guarantee firm income, but limitations and barriers to access it will impede a company's growth (Smolarski & Kut, 2011). According to Lee (2015) SMEs are severely affected by financing obstacles. According him financing constraints have doubled effect on performance of small enterprises as compared to large enterprises (Lee et al., 2015).

2.2.5   Private Sector Credit and SMEs

Small and medium enterprises have limited options for financing their capital needs for example, Borrowing from official sources such as banks or private sources i.e. friends / relatives etc (Berger & Udell, 2006). Over the years provision of formal credit by leasing companies and commercial banks to SMEs has been very negligible. Financial constraints are ranked as one of the key challenges faced by the SMEs (Beck & De La Torre, 2006).

In the beginning stage, small and medium enterprises depend entirely on internal sources, for example capital from microloans, owners' equity, or borrowings from friends and family. During the second stage as SME firms transit to more risk – more growth firms they turn toward venture capital and business angels for investments (OECD, 2006). Banks are unwilling to offer loans to SMEs at the beginning because of the high distorted information. Furthermore, SMEs lack valuable assets which can be used as a collateral for loans that add further to the resistance of banks to provide funds. According to a recent study banks are unwilling to give loans to small firms despite their view of SMEs as a highly rewarding sector (Beck et al., 2005).

A significant portion of research indicate that problems exists on both the demand and supply sides of the banking credit channel. On supply side, banks refuse to lend to SMEs because i) SMEs are sensitive to economic fluctuations and are recognized as a high risk sector; (ii) SMEs lack collateral; (iii) SMEs lack credit history and records; (iv) SMEs incur high administrative cost; (v) SMEs increase processing cost, etc. On demand side, Small and medium enterprises are unable to meet banks requirements due to; (i) small size of SMEs; (ii) poor management skills in SMEs; (vii) limited resources of SMEs, etc. These issues demonstrate that banks are not risk takers and are unwilling to lend loan to SMEs while SMEs are unable to satisfy the requirements of banks (Abe, Troilo, & Batsaikhan, 2015).

The demand and supply side constraints are recognised by the World Bank report. Recent studies have also showed that information asymmetry and higher transaction cost are confronting SMEs access to credit. Banks administrative and processing cost also become higher due to smaller size of SMEs. This hampers the credit supply of the formal institutions i.e. Banks towards SMEs (Carbo-Valverde, Rodriguez-Fernandez, & Udell, 2016)

It is evident from the literature that SMEs prefer informal funding sources, such as loans from family and friends, rather than turning to the formal sector for financing. Also there is an

inclination of SMEs toward asset-based lending, leasing, and trade credit instead of simple Bank debt services (Casey & O'Toole, 2014). The main reason for this conduct by SMEs is collateral-based lending in the banking sector, lack of suitable banking products aligned with the needs of SMEs, lack of knowledge and risk management techniques for SMEs. However, with the help of advance products for the SME sector, banks can become an important source of external credit for the SMEs. This requires primary changes in the financial sector. (Beck & De La Torre, 2006).

Economies around the globe debate on the topic of introducing reforms by the central banks for providing SMEs with greater access to credit. A study by World bank indicated that suitable lending technologies should also be created together with existing credit availability within the financial sector to incentivize banks to lend credit to SMEs (Abraham & Schmukler, 2017). Majority of policy makers describe lending technologies as exclusive mixture of basic information, underwriting and screening of policies or procedures, structure of loan contract, and monitoring mechanism (Bartoli, Ferri, Murro, & Rotondi, 2013).

Internal risk credit models have been developed by advance banks in developed countries to estimate the future expectations of a firms default , such models help to prepare accurate pricing portfolio for SMEs debt and financing (Lekkakos, Serrano, & Ellinger, 2016). Policy makers of financial sectors are taking initiatives to uplift and stimulate SMEs growth. These initiatives include financial knowledge and training programmes for SMEs to modify their operations so that banks can look at these SME as potential customers.

2.2.6 Other Constraint to SMEs

There are various microeconomic as well as macroeconomic factor which affect the operations and performance of SMEs (Bari & Cheema, 2005). According to the report from SMEDA

Pakistan, after world war II, Asian Countries promoted their SMEs for swift industrial growth. The development of SME gained strength in developed Asian countries like Japan, Korea and Malaysia from the formulation of legal policies and frameworks. SME growth and development. Evidence from various studies suggest that SMEs played an important function in the structural transformation of Asian economies (de Sousa Jabbour, Ndubisi, & Seles, 2019).

Credit rights are recognised as a crucial feature of a financial system. The market for financial services may continue to be underdeveloped without credit rights. In other words, both borrowers and lenders would face constraints in the process of loan obtaining. Reinforcing credit rights have helped potential borrowers to access and secure debt conveniently (Dietsch & Petey, 2002). Recent studies on credit rights have indicated that formation of laws to protect credit rights and establishment of debt recovery groups and institutions to recover loans from borrowers in case of default has increased the chances of debt repayment. Strong credit rights have enhanced repayment behaviour, and by reducing the risk of default, it has permitted the banks to offer cheap credit to the SMEs (Banerjee & Duflo, 2014).

Collateral is another source in debt contracts which facilitate various aspects of market imperfections in financial transactions (F. Duarte, Matias Gama, & Esperança, 2016). It decreases the probability of borrower's default, and make direct efforts to accomplish the goals and objectives of the project. Moreover, it also helps to reduce the bankruptcy cost for banks. In order for collateral to act as a source and perform these functions the property and asset rights along with credit rights needs to be formed (Domeher, 2012). A vague asset with an uncertain claim will be unable to be accepted as a collateral. Also, if rights of creditors are not well defined, banks will have an inconveniency to execute the collateral in case of credit default, therefore in such cases collateral will hold lower value. Hence it's a responsibility of

policy making institutions to well define the policies related to property rights and credit rights to improve financial services (F. D. Duarte, Gama, & Esperança, 2017).

The variations in interest rate affect the level of production of SMEs (Shankar, 2016). Recent research has empirically confirmed the findings of Schwartz and Bordo (1963) that changes in interest rates can bring about variations in the output of companies (Ferrando, Popov, & Udell, 2019). SMEs lack the basic capital to perform better and expand beyond a certain limit that may erode the performance of small and medium enterprises. A large number of small and medium enterprises are terminated before crossing the initial five years (Schwartz & Bordo, 1963).

A decrease in money supply reduces banks reserves leaving them with fewer loan consequently reducing the bank lending (Bernanke & Blinder, 1988). Banks tend to make comparatively more secure loans during times of tightened monetary policy (Nakamura, 1995). According to a study by Black and Rose (2011) high interest rate may drive banks to shift their credit from small firms to large firms. This indicates that banks shift their credit toward large firms which are less risky during times of contractionary monetary policy. Alternatively, expansionary monetary policy can remove the credit problems of the small and medium enterprises (Black & Rosen, 2011).

Government borrowing is an important factor which affects the availability of loans to private businesses. High government borrowing always result in crowding out of private sector investment (K. Das & Pradhan, 2010). Whenever government borrowings are discussed there exist a question of trade-off between government expenditure and private investment, because investment is a limited resource of an economy (Abraham & Schmukler, 2017). According to wignaraja and jinjarak. (2015) government expenditure which leads to government borrowing

from commercial or central bank has been crowding out private investment in developing countries (Wignaraja & Jinjarak, 2015).

The technology available for the SMEs in south Asia are not very commendable. Although Medium enterprises have been recognized as more technological oriented, small firms lack the basic technology needed for their better performance (Mudalige, 2015). Because they lack the technology to produce the export products, SMEs in developing countries often resort to inefficient business models which reduce their product quality. Improvements in advance technology may help the SMEs to increase their productivity. (Parrilli & Elola, 2012).

SMEs are often faced with sales tax and labour law problems and most SMEs view sales tax and labour laws as a constraint for their growth (Bari & Cheema, 2005). Due to absence of entrepreneur-friendly programs, taxation costs add up to the point that SMEs may burnt out. The government should therefore encourage entrepreneurship through establishing business-friendly policies and easy financing options (Nguyen, 2017).

A major constraint on SMEs performance is because of poor human skills, lack of knowledge and planning instead of the ability to have machines (Ismail & King, 2005). Lack of skilled labour, and finding suitable employees for a particular jo is becoming a challenge for SMEs. people with industrial experience are either too costly to afford for SMEs, or they do not want to take the risk of working for a small company. The abilities of managers and labours to deal with economic and financial fluctuations in the economy will certain the growth progress of SMEs. Thus, SMEs have a dual burden of finding right employees and then equipping them with right amount of skills and expertise. In a developing country, it is only with precision and care that the SME sector can rapidly grow (Panagiotakopoulos, 2011).

Short-term variations in real interest affect capital costs, which consequently affect business investment and demands of consumer goods. Rigid government rules and regulations hinder the production and growth of these enterprises (Berger & Udell, 2006). Due to nature of risk attached to the SMEs there is a dire need for entrepreneurs to cover their risk with insurance. However the credit and budget constraint impede SMEs managers to buy a risk insurance for their business (Wehinger, 2012). Risk is a central part of small and medium enterprises, and governments in developing countries can play an important function in diversifying the risk faced by new SMEs to promote their growth.

A supporting business environment will support new enterprises to produce more jobs and generate economic goods and services (Belás, Bartos, Habánik, & Novák, 2014). Liberal business policies will allow entrepreneurs to take the risk and generate benefit for themselves and society. It is recommended to create legal framework, well-defined property rights and bankruptcy environment through which private sector credit will gain pace. Additionally the procedures to of a contract agreement should be made time saving and transparent in order to enforce contracts efficiently (Berger & Udell, 2006).

2.3   Research Hypotheses

On the basis of literature review the following hypothesis were developed.

Hypothesis-1

H1: Private sector credit has a significant impact on SMEs growth

Hypothesis-2

H2: Broad Money has a significant impact on SMEs growth

Hypothesis-3

H3: Lending interest rate has a significant impact on SMEs performance

Hypothesis-4

H4: Foreign Direct Investment has a significant impact on SMEs performance.

Hypothesis-5

H5: Trade Openness has a significant impact on SMEs performance.

2.4 Variables and theoretical link

Variables	Theoretical link
Private sector credit	Main independent variable. Explains the effect of private sector credit on SMEs performance in SAARC countries.
Lending interest rate	It represents overall credit risk in the economy and how it affects loan supply to SMEs.
Broad Money (M3)	Total quantity of currency in circulation and in the form of reserves held at central bank which has a direct relation with both interest rate and inflation
Trade openness	Its measures the economic policies which either promote or restrict the trade between countries. It can reduce the cost of production for enterprises that import raw material which can enhance their profit.
Foreign direct investment	It represents all the investment made by a foreigner in a host country which may lead to opportunities and increased productivity for domestic market.

3. Methodology and Data Descriptions

3.1 Research Methodology

3.1.1 Introduction

This chapter presents a brief explanation of the methodology that was used in this study. Research methodology contains the research design, the statistical procedures or techniques used to process and analyse the data, description of variables, the timeframe for which the data was obtained, and the population and sample size which was employed during the study to complete the research. This section will allow us to critically evaluate the study's overall reliability and validity.

3.1.2 Population and sample size

The population outlined in our current study includes all the countries which are located in the SAARC region. There are eight countries in the SAARC region namely Pakistan, Sri Lanka, India, Bangladesh, Nepal, Bhutan, Maldives and Afghanistan. All countries were considered for our study however due to unavailability of data the sample of the research is limited to only seven countries and Afghanistan was excluded. All the countries are defined in numbers and their data was collected from the period of 1990 to 2018.

3.1.3 Collection of data

This research study is entirely based on secondary data. In order to conduct the research annual data of past 28 years was collected for each country in the sample size from the period of 1990 to 2018. To measure the impact of private sector credit on SME performance the data was collected from World Bank, State bank of Pakistan, International Financial Statistics, International Monetary Fund, and Global economy estimates. Moreover, the data for other

SAARC countries were collected from their respective central banks, theglobaleconomy.com and tradingeconomies.com. Publications of annual statistics report were also found very helpful in the selection and process of data.

3.1.4   Data analysis method

In this study, we used balanced panel data of seven countries for 28 year from the period of 1990 to 2018. In panel data, individuals (N) units are observed at several time periods (large T) in time. The Panel data is formed by connecting the time series and the cross-sectional observations. The Panel data is broadly used in previous studies to analyse two-dimensional observation: Xit, where i range from 1 to n and represent the cross-sectional unit and t range from 1 to T and represent the observation of time. A regression is run on these two dimensions afterwards to forecast the relationship between variables. have every observations from 1 to n are observable in the balanced panel data through period 1 to T (Maddala & Lahiri, 1992).

 Panel data gives more variability, extra degree of freedom and less multicollinearity between the variables. In our study Stata-13 has been used to analyse the data. In order to check the average, middle value, and deviation between the data set a descriptive analysis has been applied to find the standard deviation, mean and median. The correlation analysis has been applied to see the relationship and intensity between our variables. Moreover, Random effect and fixed effect models was applied to observe the relationship between independent and dependent variables. In order to recognise which test is suitable and appropriate to run the regression analysis Hausman test was applied.

3.2   Econometric Model

In this study econometric models were used to evaluate the possible connection among various variables. This methodology is supported by the recent study of (Manzoor et al. 2019) their study used fixed effect and random effect method for balanced panel data, Moreover their study

also used multiple regression analysis in order to explain the impact and relationship of variables in each particular country (Manzoor, Wei, Nurunnabi, & Abdul Subhan, 2019). The econometric model uses a statistical equation to specify the relation between our independent and dependent variables which has been given as below

3.2.1 Fixed Effect Model

If the characteristics of data vary across time but are common to all units, only then we will use fixed effects model. In this model fixed slope remain constant but intercept moves with the cross-sectional data. In other words, during fixed effect estimation time shows no significant effect and only cross-sectional variables are significant. According to Wooldridge when we have a different sample for each unit of the panel data , pooled OLS is used, while random effects or fixed effects methods are mostly used when we use the same sample of unit for different period of time (Wooldridge, 2019).

$$SMEPit = \alpha 0 + \alpha 1 PSC\iota\tau + \alpha 2 BM\iota\tau + \alpha 3 LIR\iota\tau + \alpha 4 TO\iota\tau + \alpha 5 FDI\iota\tau + \epsilon\iota\tau$$

Here, the intercept i indicates that it changes with respect to cross sectional variable hence the intercept is not constant. Here seven countries in SAARC region were considered. This movement of intercept "i" is due to the specific feature of each country in SME manufacturing sector of SAARC region. The intercept change with time while on the other hand, slope is remaining constant. Due to this a significant effect of cross section can be seen.

3.2.2 Random Effect Model

In this model the parameters of the model are assumed to be random variables. It is a type of panel linear model, which states that the data being tested is having each unit a common error term drawn randomly from a distribution of different populations. Random effect model considers the differences between individual study effects across the study. If the effects in the

study are diverse, then random effects method is appropriate because it contains a random term error in between the model, whereas if the effects in the study are similar then we use fixed effect method.

The data analyse in random model is assumed to be drawn from hierarchy of different population (Greene, 2001). It is also called the variance component model. In this model the parameters of variable are random. The αi term is considered as a random variable taken, for each i, from a common distribution instead of constant. The random effects models are used in the analysis of panel data with the assumption of no fixed effects.

3.2.3 Hausman Test

In order to identify which estimation model is more suitable for our research Hausman test is applied which was developed by Hausman in 1998. In this test the if the null hypothesis is rejected then it indicates that random effect model is more suitable to apply. The test examines one estimator 's consistency compared to an alternative less efficient estimator which can be recognized as consistent. It evaluates if a statistical model corresponds to the data. In the present study, Random effects (RE) method was accepted under the null hypothesis because of higher performance, while the Fixed effects (FE) method was considered consistent and thus accepted under the alternative hypothesis.

3.2.4 The Econometric Equations

In this study two research techniques were used. The fixed-effect method was used to achieve the study objectives and, second, multiple regression models was used further to cross check the impact of the private sector credit on SMEs performance at each country. The key rationale behind these two methods lies in the essence of the data and its outcomes. The data consist of cross-sections (no. of countries) and time series (1990- 2018) in this study, for which the panel

dataset is suitable for making an analysis (Gujarati, 2009). Random effect method and Fixed effect method has been applied for the static panel data set. The previous literature recommends fixed effect method for the balance panel data set used In this Study (Asteriou & Hall, 2015).

The results of the multiple regression analysis were examined individually through the time series data from the respective countries. There are seven regression equations through which the effects of private sector credit on SME performance in the particular countries were tested. SME performance (SMEP) is measured with the manufacturing sector contribution to GDP (Ayuba & Zubairu, 2015; Isola & Mesagan, 2018). The reason behind this technique is if the manufacturing sector contribution to GDP is increasing due to availability of private sector credit, it can possibly reflect that SME performance is improving within the country.

$$SMEP_{it} = \alpha_0 + \alpha_1 PSC_{\iota\tau} + \alpha_2 BM_{\iota\tau} + \alpha_3 LIR_{\iota\tau} + \alpha_4 TO_{\iota\tau} + \alpha_5 FDI_{\iota\tau} + \varepsilon_{\iota\tau} \ (1)$$

where ι: 1, 2, 3, 4, 5 (number of countries), τ: 30 (Time period), SME performance (SMEP); Share of SME as a percentage of GDP, PSC: private sector credit to SMEs, BM: Broad Money (M3), LIR: Lending Interest Rate, TO: Trade Openness, FDI: Foreign Direct Investment.

Regression Model for Pakistan:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_1 \ (2)$$

Regression Model for Sri Lanka:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_2 \ (3)$$

Regression Model for India:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_3 \ (4)$$

Regression Model for Bangladesh:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_4 \ (5)$$

Regression Model for Nepal:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_5 \quad (6)$$

Regression Model for Maldives:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_6 \quad (7)$$

Regression Model for Bhutan:

$$SMEP = \alpha_0 + \alpha_1 PSC + \alpha_2 BM + \alpha_3 LIR + \alpha_4 TO + \alpha_5 FDI + \varepsilon_7 \quad (8)$$

findings of these regression equations were explained respectively in results and discussion chapter respectively.

3.3 Description of Variable

This study aspires to investigate the impact of private sector on credit to SMEs in SAARC countries. So as to achieve this objective this section of the study explains the variable which are used in our study.

Dependent variable

3.3.1 SME performance

In this study, SME performance is a dependent variable. SME performance (SMEP) is measured by adopting proxy variable which is the percentage contribution of SMEs to the GDP in manufacturing sector. SME performance tells us how efficiently SMEs are operating. It is considered as one of the best estimators to measure SME performance in term of percentage to GDP because of two reasons. Firstly, private sector manufacturing is acceptable by both internal policy makers and external analysts as a reliable source to indicate the realistic position of the SMEs performance. Secondly, it shows the direct impact of SMEs performance on a country economy.

Independent Variables

3.3.2 Private sector credit

Bank credit to the private sector is often considered as lifeblood for various sectors of the economy and if it goes dry, the industry and other sectors of the economy could suffer immensely. Bank credit to the private sector refers to the financial services provided by depository companies to the private sector (loan giving companies except central banks), through commercial loans, trade credit, purchases of non-equity securities and other receivable accounts, which provide a claim for repayment. It represents the loans to small and medium

enterprises in our study. The data for private sector loans has been mined from economic archives of central banks of all SAARC countries.

3.3.3 Bank Lending Rate

Lending interest rate (LR) plays an important role in private sector credit. Investors seek to invest in the market which offers low rate. So, for a developing region like South Asia, it is necessary to keep interest rate as low as possible to attract investors. Lending rate is the bank rate that typically fulfils the short- and medium-term financing needs of the private sector. Normally, this rate is divided according to borrowers' creditworthiness and funding objectives. However, the terms and conditions applied to those rates differ by region, restricting their comparability.

3.3.4 Broad Money (M3)

Broad Money is a term for calculating how much capital circulates in an economy. It is described as the most comprehensive method of measuring the money supply of a given country. It accounts for highly liquid assets, cash, and checkable deposits, along with a little more Illiquid capital sources such as deposit certificates (CDs), marketable securities, foreign currencies, money market accounts, Treasury bills (T-bills) and everything else that can quickly be transformed into cash – except company shares. Various countries mostly describe their money measuring tool differently. The word Broad Money is used in academic settings to prevent misinterpretation. Broad Money in most cases means the same as M3, whereas M0 and M1 typically apply to narrow money.

3.3.5   Foreign Direct investment

Foreign direct investment (FDI) is a crucial factor in international economic integration. FDI builds long-lasting, stable and direct impact on developing economies. The distinction between developed and developing country holds a significant perquisite for positive and negative Impact of FDI on the productivity of the firms. According to The Theory of Industrial Organisation and International Trade, FDI can have both positive and negative impact on a host country. Excessive FDI inflows into a country can have either positive or negative effects on the economy. For example, on positive side FDI can affect labour and capital markets, improve trade patterns and enhance economic development. While the disadvantages of FDI are that it can decrease the productivity and performance of SMEs and local enterprises.

3.3.6   Trade Openness

Trade liberalization is generally believed to be beneficial both for the domestic economy and for the world. A recent study investigated the impact of ongoing trade liberalization in South Asian region on local SMEs. Their study showed a positive and important result between trade openness and SMEs growth in the region. They recommended the measures to enhance cooperation and collaboration between south Asian countries to enhance trade openness which may improve the employment and consequently the living conditions of the people SMEs' performance can be understood from a quantitative perspective: efficiency, financial results, level of production, number of customers (Anggadwita & Mustafid, 2014), market share, profitability, productivity, dynamics of revenues, costs and liquidity (Gupta & Batra, 2016; Zimon, 2018), etc. and also from a qualitative perspective: goals achievement, leadership style, employee behaviour (Anggadwita & Mustafid, 2014)

3.4   Variables Construction

Variables	Description/proxy	References
SME Performance	Percentage contribution of manufacturing sector to GDP.	((NWOSA Philip Ifeakachukwu O. I., May 2013) Ayyagari, Beck, & Demirguc-Kunt, 2007; Chugtai & Alam, 2014; Isola & Mesagan, 2018)
Private sector credit	Loan given to private sector by the commercial banks	(Ayuba & Zubairu, 2015; Imoughele, 2014; Nzomoi, Were, & Rutto, 2012)
Lending interest rate	Loan at which interest payment are charged by commercial banks	(Kisseih, 2017; Msangula, 2015; Nyumba, Muganda, Musiega, & Masinde, 2015)
Broad money M3	Total circulating money in market	(Gatawa, Abdulgafar, & Muftau, 2017)
Trade openness	Availability and flexibility of host country to foreign investors for international trade	(Anas, 2012; Murat & Isaac, 2019; Sanjo & Ibrahim, 2017)
Foreign direct investment	foreign direct investment in the host economy.	(Orji et al., 2015; Subair & Salihu, 2011; Tan & Tan, 2014)

4. Results and Discussion

The chapter describes the result of estimation and discussion on findings. First of all, to see the behaviour of the data descriptive statistics is applied. Then the correlation analysis indicates the relation between the variables. Result of estimation model and the impact of independent and control variables on firm profitability is applied for regression analysis STATA-13 was used.

4.1 Summary Statistics of variables

Descriptive statistics is applied to see the accuracy and behaviour of all the dependent and independent variables. The table of descriptive analysis shows mean, median, minimum, maximum, standard deviation (S.D), skewness and kurtosis values. The average value of sample data of each variable is shown by mean, while S.D shows dispersion of values. The low and high values in the sample can be seen on Maximum and Minimum rows. Skewness is the measure of symmetry or lack of symmetry. The data will be symmetric if it looks like its centre from its both sides. Kurtosis shows about data that if it is highly tailed or lightly tailed from its origin.

Variables	Obs	Mean	Min.	Max.	Std,Dev	Skewness	Kurtosis
SMEP	203	11.79	1.92	19.51	4.40	-0.39	1.93
PSC	203	29.42	4.1	64.49	14.11	0.47	2.40
BM	203	49.82	20.55	109	16.69	.849	2.92
LIR	203	12.74	6.70	20	2.83	.094	2.62
TO	192	3.94	2.74	5.21	.566	.347	2.48
FDI	187	19.11	10.82	24.51	2.69	-.150	2.27

According to descriptive statistics, Small and medium enterprises performance (SMEP) is measured by SME contribution to GDP. Statistical analysis identified that every variable has 210 observation. The mean of SMEP is 11.79 it shows the average value. Maximum value of SMEP is 19.51 and minimum value is 1.92 through the period of 1990 to 2018. Standard deviation 4.70 shows the positive dispersion of data, while the value of skewness is -0.39 that shows that the data is distorted in negative direction from its centre with respect to its origin. And the value of kurtosis is 1.93 it means that the data is normally distributed. The kurtosis values and asymmetry between -2 and +2 are considered appropriate to show normal univariate distribution (George, 2011).

Private sector credit is abbreviated as PSC and it is measured by all credit given to private sector by commercial banks. Private sector credit mean is 29.43 and standard deviation is 0.545 which tells the data is highly dispersed form its mean value. The maximum and minimum value of private sector credit is 64.49 and 4.1 respectively. The skewness of PSC is 0.47 which shows the values is on positive direction from its centre. Kurtosis is 2.40 which shows light tail of values and a perfect normal distribution.

Lending interest rate is measured by the rate at which loan were taken from the commercial banks by private sector. LIR has average value of 12.75 and standard deviation is 2.83 that indicate the low dispersion in the values which shows that the values are closer to the mean. The lowest and highest value of observation is 6.70 and 20 respectively. Skewness is 0.094 which shows positive flow of values from its central point. Kurtosis is 2.62 which shows light tail of values and a perfect normal distribution.

Broad money which indicates all the circulated money in the market has mean value of 49.82 and standard deviation of 16.69 which shows low variation of values to the mean. The maximum and minimum value of BM is 109.05 and 20.55 respectively. BM has skewness of

0.84 which shows positive flow of values from its central point and kurtosis is 2.49 which indicates light tail of values and a perfect normal distribution.

Trade openness is abbreviated as TO which indicates facilities of host country to foreign investors for international trade. Trade openness has mean value of 3.94 and standard deviation is 0.564 which shows the values are closer to the mean. Minimum and maximum value is 2.74 and 5.21 respectively. Skewness is .32 which shows that data curve is on positive side. Kurtosis is 2.48 that shows the values are light tailed from its origin and exhibit a perfect normal distribution.

Foreign direct investment which indicates all the foreign investment money in the economy has mean value of 19.11 and standard deviation of 2.69 which shows the values are closer to the mean. The maximum and minimum value of FDI is 24.51 and 10.82 respectively. FDI has skewness of -0.15 which shows negative flow of values from its central point and kurtosis is 2.67 which indicates light tail of values and a perfect normal distribution.

4.2   Correlation Analysis

The relation between two variables can be measured by correlation analysis (Abdi, 2007). This analysis is important to measure the Multicollinearity between the variables. To find the multicollinearity among the independent variable this analysis shows correlation between the independent variables. If multicollinearity is found between variables, then it will cause a major problem for regression. Because the estimation shows standard error and results becomes insufficient and unreliable. If the correlation between independent variables are high, then they will hide the impact of each variables on dependent variable. Moreover, multicollinearity shows affect not only on the value of beta but sometimes regression analysis will not perform.

Hair et al. argued that Multicollinearity is not a severe concern if the result of correlation analysis between dependent and independent variables is below 90% (Hair, Black, Babin,

Anderson, & Tatham, 2014). Moreover, a recent study identified that if the correlation exist between two independent variables are less than 75% then there will be no major problem of multicollinearity (George, 2011)

	SMEP	PSC	BM	LIR	TO	FDI
SMEP	1.00					
PSC	.0146	1.00				
BM	-.051	.786	1.00			
LIR	-.123	-.456	-.466	1.00		
TO	.601	.097	-.125	.312	1.00	
FDI	.545	.388	.377	-.265	-.305	1.00

The correlation between its own variable is 1. The relation between the independent variables can be seen in the correlation matrix. The positive and negative correlation exist between the variables. The higher correlation between independent variables is 58% which exist among PSC and BM. The negative correlation states that the value of one variable is reduced by an increase in another variable. Through correlation matrix one may see that there is no multicollinearity exist between the independent variables. Due to no multicollinearity between the dependent variables, there is no need to drop any variable.

The correlation between private sector credit and Small and medium enterprises contribution to GDP is 14% that indicate that one unit increase in private sector credit will increase the SME performance to 1.4%. A negative relationship exist between SME

performance and broad money 1% increase in broad money would decrease 5.1% unit of SME performance.

Lending interest rate is negative related to SME performance one unit increase in LIR in the economy will cause the 12% decrease in SME performance. A 1% increase in trade openness would increase SME performance by 60%. Foreign direct investment and SME performance have a positive relation. It identifies that 1% increase in FDI can increase SME performance by 54%. Likewise, the correlation between the independent variable can be observed through correlation matrix

4.3   Regression Analysis

This study has balanced pooled data. It contains seven cross-sectionals units and the time period is thirty years ranging from 1990-2019. Fixed effect and random effect model are used for regression analysis. Furthermore, Hausman test is applied in order to identify and adopt the suitable model between fixed and random effect to study the relationship between dependent and independent variables.

4.3.1   Hausman test

H_0 null hypothesis: both fixed and random estimations are right and therefore they should yield "similar" coefficients.

H_1 alternative hypothesis: the random effects estimation is wrong the fixed effects estimation is right.

If the alternative hypothesis is right, the two sets of coefficients dissimilar. This is because the fixed effects and random effects have different assumptions. If the random effect assumption is incorrect, the random effects estimator will be inconsistent but then the fixed effects estimator will remain unchanged and will be expressed in a discrepancy between the two set

of coefficients the bigger the gap, lesser are chance that two sets of coefficients are similar, the bigger is the Hausman figure.

Variables	(b) fixed	(B) random	(b-B) difference	probability
PSC	.0300288	.0276345	.002394	.
BM	-.063078	-.063729	.000651	.
LIR	-.164558	-.127354	-.037202	.
TO	1.612094	.401263	1.21083	.
FDI	.0453116	.1365559	-.1818676	.

b = consistent under Ho and Ha;

B = inconsistent under Ha, efficient under Ho;

Test Ho: difference in coefficients not systematic

$$\text{Chi2 (5)} = \text{(b-B) '[(V\_b - V\_B) ^ (-1)] (b-B)}$$

$$= 1364.27$$

$$\text{Prob} > \text{chi2} = 0.000$$

A big and substantial Hausman statistic means a major difference, and therefore we can reject the null hypothesis (Hausman, Stock, & Yogo, 2005). Our Hausman stat is 1364.27 which is very big, and the reason for that is; The variations between some of the coefficients are significant enough to be obvious, so we can ignore random effects as inconsistent and then go with fixed effects. Moreover, the probability Prob > chi2 is less the 5% hence P-value = 0.000 which also reject the null hypothesis.

4.3.2 Fixed effect method

The Hausman test identified that fixed effect model is appropriate. The impact of independent variables can be seen on the fixed effect analysis. SMEP is the dependent variable which is the proxy of performance. SMEP tells the performance of SMEs by revealing their contribution to GDP. A higher SMEG shows that small and medium enterprises have contributed higher ppercentage to GDP by using private sector credit. Here private sector credit is main explanatory variable while BM, LIR, TO and FDI are explanatory economics factors which are also used as independent variables.

Table 1. Results of the fixed effect method for SME performance in the SAARC region.

Dependent Variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	.030028	.014797	2.03	0.044
BM	-.063078	.015505	-4.07	0.000
LIR	-.164558	.047969	-3.43	0.001
TO	1.61209	.531570	3.03	0.003
FDI	-.0453116	.1028828	-0.44	0.660
F-test	5.78		Prob>F	0.0000
R-squared	0.4251		No. of obs.	176

In this table, the results show that private sector credit has a positive and significant effect on dependent variable (SMEP) which is a proxy for SME performance. The empirical results show that PSC and TO have a high positive and significant impact on the SMEs performance in SAARC countries. The P-value of these variables is below 0.05 and the T-value is above the threshold indicating the importance of the results (Asteriou & Hall, 2015). The coefficient value of PSC is 0.030 which indicates that 1% increase in private sector credit will increase SMEs performance by 3% .These findings correspond to previous studies such as (Ayuba & Zubairu, 2015). This means development in the PSC is a foundation of performance enhancement for SMEs. Smaller firms need less skills and less money to start businesses that generate new jobs in the country. The position of the banking sector is important for promoting small businesses, which is explained in detail in this study. If the commercial banks' credit facility is friendly and welcoming to small entrepreneurs, then the performance of SMEs will increase dramatically.

A crucial result is about Broad Money. The p-value of 0.000 and coefficient value of -0.063 of the Broad Money indicates that it has a significant and negative effect on the SME performance. Here, the variable sign is negative which is supported by the previous studies of (Ihsan & Anjum, 2013; Sulaiman, 2020). This means that when Broad money increase in the economy, it causes inflation and the share of the SMEs to GDP will decrease. Normally, if Broad money increase, it leads to higher supply of money in the economy which is a key to reduce interest rate. When interest rate decrease, it directly enhances the ability of SMEs to perform better. In the authors' opinion, it is because of unavailability of data and variation in the magnitude of money supply in the respective countries. Therefore, there is an immense need to explore the impact of money supply on SME performance which is beyond the scope of this study.

The P-value of 0.001 shows that Lending interest rate has a highly significant impact on SMEs performance. The coefficient value is -0.164 which indicates that a 1% increase in interest rate decrease SMEs performance by 164% which is in accordance with Monetary theory. These results are supported by the previous studies of (Msangula, 2015; Nyumba et al., 2015). In respect to this the facility of low interest rate is precondition for improving SMEs performance and output. The SAARC countries must reduce interest rate to promote their SMEs.

Similarly, another important result is the high impact of the trade openness (Net exports and imports of a country) on SME performance. The coefficient for trade openness shows a 1% increase in TO increase SMEs performance by 161%. These results are supported by the previous studies of (Murat & Isaac, 2019). Hence the SAARC countries should support intra-trade and bilateral trade relations between all member countries to promote their SMEs.

Foreign direct investment has a negative and insignificant effects on the SMEs of the region which is in line with empirical work of (Chow Wei Choung, 2014) (Oladimeji, Ebodaghe, & Shobayo, 2017). The value of P is below 0.05 and coefficient is -0.045. The results indicate that the benefits of FDI are not paid off in the SMEs sector and it decrease SMEs productivity in SAARC countries. This result is in accordance with the previous studies which suggest that foreign direct investment has a negative impact on developing countries economy (Orji et al., 2015) and (Subair & Salihu, 2011).

The significance of a model is seen through F-stat which is 5.78 this indicates that the model is highly significant. R-Square indicates the precision of good fit which lies between 0 and 1 (Baltagi, 2008). The value of the R-square is 0.42 this denotes that 42 percent of the variables are explained by the model (Y. Chen, 2016). Our results are coherent with the previous research findings (Anas et al. 2012). (Anas, 2012; Ayuba & Zubairu, 2015).

4.4 Multiple regression models

In order to verify the impact of the Private sector credit on SME performance in each country in the SAARC region, a multiple regression analysis was performed. The multiple regression models were developed for seven countries: Pakistan, India, Sri Lanka, Bangladesh, Nepal, Bhutan and Maldives. The findings of the regression analysis were reviewed individually through time series data of the individual countries and are explained in Tables 4.4.1. The regression results for each country are presented below

	PSC	BM	LIR	TO	FDI
Pakistan	.105**	-.075	-.132**	5.09**	-.097
	(.044)	(.060)	(.054)	(1.93)	(.379)
India	.076*	-.069	.255**	.083**	.442
	(.061)	(.061)	(.104)	(.036)	(.209)
Sri Lanka	.134**	-.279***	-.264**	.576	1.45***
	(.061)	(.077)	(.108)	(1.88)	(.488)
Bangladesh	.128**	-.015	-.073	.831	-.230
	(.062)	(.045)	(.135)	(1.35)	(.160)
Nepal	.108**	-.059***	-.148*	5.64***	-.135
	(.064)	(.012)	(.050)	(.601)	(.090)
Maldives	.027**	.084***	.145	2.12	-.400***
	(.012)	(.029)	(.096)	(1.34)	(.164)
Bhutan	.029*	-.057***	.783*	4.49***	-.073
	(.015)	(.019)	(.404)	(1.42)	(.162)

Note * significant at 10%.   **significant at 5%.   ***significant at 1%

4.4.1 Regression results for Pakistan

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Pakistan. The observed results reveal that PSC and TO have a high significant and positive impact on the SMEs performance in Pakistan. The P-value of PSC and TO is smaller than 0.05, suggesting a significant impact (Qing, Asif, Hussain, & Jameel, 2019). The coefficient of PSC 0.105 shows a 1% increase in PSC increase SMEs performance by 10%. The P-value and coefficient of trade openness is 0.015 and 5.09 which indicates its significant and positive impact on SME performance. This suggests that improvement in the trade sector is an efficient way to enhance the performance of SMEs in the country. Moreover, the P-value of 0.799 explain that there is an insignificant impact of Foreign direct investment (FDI) on SMEs in Pakistan. The FDI coefficient -0.097 indicate that FDI in Pakistan negatively affect firm's productivity and reduce SMEs performance.

Lending interest rate (LIR) have a significant and negative effect on SME performance in Pakistan. The P-value 0.024 and coefficient of LIR -0.132 indicates that a 1% increase in LIR decrease SME's performance by 13%. Thus there is dire need to reduce the interest rate in order to enhance SME performance in the country. The P value for Broad Money 0.227 indicates an insignificant relation and coefficient of -0.075 indicates a negative relationship between BM and SME performance in the country. The value of the R-square is 0.71 this denotes that 71 percent of the variables are explained by the model.

4.4.2 Regression results for India

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in India. The observed results reveal that PSC have a significant and positive impact on the SMEs performance in India. The P-value of 0.067 and coefficient 0.076 shows a positive impact of PSC on SMEs growth. It shows a 1% increase in PSC increase SMEs performance by 7.6%

The coefficient of TO is 0.83 which indicates its positive impact on SME performance. The P-value 0.122 and coefficient of 0.442 indicate that there is an insignificant and positive impact of Foreign direct investment (FDI) on SMEs performance in India

The coefficient of BM −0.069 and P-value 0.271 shows an insignificant and negative impact of BM on SME performance in India. The P-value 0.011 and coefficient 0.25 of Lending interest rate indicates that a 1% increase in LIR increase SME's performance by 25%. Moreover, the results explain that the value of the R-square is 0.42 this denotes that 42 percent of the variables are explained by the model.

4.4.3 Regression results for Sri Lanka

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Sri Lanka. The P-value of PSC is smaller than 0.05, suggesting a significant impact. The coefficient of PSC is 0.134 which shows that a 1% increase in PSC increase SMEs performance by 13%. The P-value and coefficient of trade openness is 0.762 and 0.576 which indicates there is insignificant and positive impact of TO on SME performance. Moreover, the P-value of FDI is 0.007 and coefficient for FDI is 1.45 which indicate that a 1% increase in FDI increase SMEs performance by 145% thus enhance the performance and productivity of SMEs in Sri Lanka. The P-value 0.023 shows that lending interest rate (LIR) have a significant effect on SME performance in Sri Lanka. The coefficient of LIR -0.264 indicates that there is dire need to reduce the interest rate in order to enhance SME performance in the country. The coefficient for Broad Money -0.279 indicates that a 1% increase in BM increase SMEs performance by 27% which shows that money supply causes inflation. The P-value of BM is 0.001 which is significant. The value of the R-square is 0.63 this denotes that 63 percent of the variables are explained by the model.

4.4.4 Regression results for Bangladesh

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Bangladesh. The P-value of PSC is 0.051 suggesting a significant impact on SMEs performance. The coefficient of PSC 0.128 and P-value 0.051 shows a positive and significant impact on SMEs growth. This indicate that a 1% increase in PSC can increase SMEs performance by 128% The P-value 1.64 and coefficient -0.230 of FDI indicate that foreign direct investment has an insignificant and negative relation with SMEs performance in Bangladesh.

Lending interest rate (LIR) have P-value 0.591 which shows an insignificant effect on SME performance in Bangladesh. The P-value 0.736 and coefficient value of -0.015 of Broad Money shows an insignificant and negative relationship between money supply and SME performance in the country. The value of the R-square is 0.70 this denotes that 70 percent of the variables are explained by the model.

4.4.5 Regression results for Nepal

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Nepal. The P-value of PSC and TO is 0.045 and 0.000. The coefficient of PSC is 0.108 shows that a 1% increase in PSC increase SMEs performance by 10%. The coefficient of trade openness TO is 5.64 which indicates its significant and positive impact on SME performance. Moreover, The FDI coefficient -0.135 indicate that there exists negative relation between FDI and SMEs performance.

Lending interest rate (LIR) have a significant and negative effect on SME performance in Nepal. The coefficient of LIR -0.148 indicates that lower interest rate can enhance SME performance in the country. As explained above the coefficient -0.135 for Broad Money

indicates a negative relationship between SME performance in the country. The value of the R-square is 0.91 this denotes that 91 percent of the variables are explained by the model.

4.4.6 Regression results for Maldives

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Maldives. The P-value of PSC is 0.40 which shows a significant impact. The coefficient of PSC 0.27 shows that a 1% increase in PSC increase SMEs performance by 27%. The coefficient of trade openness (TO) is 2.12 which indicates its significant and positive impact on SME performance. The results also explain that there is a significant and negative impact of Foreign direct investment (FDI) on SMEs in Maldives which is in line with the previous studies. The coefficient -0.400 of FDI indicate that FDI in Maldives reduce SMEs contribution to GDP.

Lending interest rate (LIR) have a significant and positive effect on SME performance in Maldives. The coefficient of LIR 0.145 indicates that interest rate is positively related to the SMEs performance in Maldives which seems misleading therefore there is an immense need to further investigate it. An important result is the coefficient 0.084 for Broad Money which indicates a positive relationship between SME performance in the country which is accurate but opposite to the results of other SAARC countries. The value of the R-square is 0.93 this denotes that 93 percent of the variables are explained by the model.

4.4.7 Regression results for Bhutan

Table 4.4.1 explains the effect of private sector credit on the SMEs performance in Bhutan. The observed results reveal that PSC have a significant and positive impact on the SMEs performance in Bhutan. The P-value of PSC is significant at 10%. The coefficient of PSC 0.029 indicates that a 1% increase in PSC can increase SMEs performance by 2.9%. The P-value and coefficient of trade openness is 0.007 and 4.49 respectively which indicates its significant and

positive impact on SME performance. Moreover, the results explain that there is an insignificant and negative impact of Foreign direct investment (FDI) on SMEs in Bhutan which is in line with the previous studies. The FDI coefficient -0.073 indicate that 1% increase in FDI in Bhutan leads to 0.073% low productivity of local SMEs.

Lending interest rate (LIR) have a significant effect on SME performance in Bhutan. The coefficient of LIR 0.783 indicates that there is an impact of LIR on SME performance in the country. The coefficient for Broad Money -0.057 indicates a negative relationship between SME performance in the country which is in line with the previous studies. The value of the R-square is 0.54 this denotes that 54 percent of the variables are explained by the model.

5. Conclusion and Recommendations

The important feature of the study is that it has come up with the conclusion that Private Sector Credit has a positive effect on SMEs performance in SAARC countries. An increase in Lending interest rate results in decreased performance of SMEs in SAARC countries. The results also establish the impact of trade openness on SMEs performance in SAARC region. An efficient trade policy with less tariff duty can results in high SME performance because this will allow SMEs to source their raw material from other countries easily with lower cost. The study also establishes a negative relationship between Broad money and SMEs performance. Moreover, the results of this study shows an insignificant and negative impact of FDI and on the performance of SMEs.

The empirical results we obtained in this study match the results from the economic and financial theory. The P value of our main variable PSC is less than 5% which indicates that private sector credit have a significant and positive impact on SMEs performance. The results obtained in this study showed a positive relationship of private sector credit and trade openness on SMEs performance in SAARC countries, and established the negative relationship of broad money, lending interest rate and foreign direct investment on SME performance in respective counties.

Supported by this study it is recommended that PSC should be made convenient and accessible on easy terms and lower interest rate which may help SMEs to function their operations without financial constraints and thus add value to the overall economy. Trade openness among south Asian country should be the core focus of foreign policy of SAARC countries which can play a vital role in reviving the declining SMEs industry. Lending interest rate has a negative impact on SMEs performance therefore the monetary policy of a country should focus on reducing it. The foreign direct investment in most third world countries are made to hire cheap

labour and create competition in the market which may decline comparative advantage of local SMEs so the government policy which may sustain local SMEs is needed. The broad money has a negative relationship with SMEs which needs further investigation.

The outcomes of this research will provide future directions for policy makers to promote the Private sector credit in the SAARC countries for better performance of SMEs. Secondly, it will help them to reduce interest rate so as to decrease the lending cost of SMEs. Third this will increase collaboration between the SAARC countries to promote trade as their impact is evident from the present study in needed. Thus, this work is to assist respective governments to formulate those policies which are in favour of SMEs and promote supportive business environment in the SAARC region.

5.1   Limitations and future recommendations :

The data availability for SMEs in South Asia is not commendable. Due to lack of attention most data is not uploaded by the concerned institutions which may constraint the research of scholar. However, There are few areas which are recommended for the future research. For instance, to investigate the impact of broad money on SMEs performance in SAARC countries. Additionally, the impact of the Monetary policy on availability of SMEs finance can be analysed in future research in order to explore the main barriers for SMEs growth and their recommended solutions in the South Asian region.

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7. APPENDIX

7.1   Fixed effect method for SAARC region.

Dependent variable (SMEP)

Variable	Coef.	Std. Err.	z	p> | z |	[95% Conf.	Interval]
PSC	.030028	.014797	2.03	0.044	.000809	.059247
BM	-.063078	.015505	-4.07	0.000	-.093694	-.032461
LIR	-.164558	.047969	-3.43	0.001	-.259276	-.06984
TO	1.61209	.531570	3.03	0.003	.562489	2.66169
FDI	-.0453116	.1028828	-0.44	0.660	-.248457	.157834
_CONS	11.32935	2.22789	5.09	0.000	6.93029	15.7284

Mean dependent var	12.4121		SD dependent var		4.7299
R-squared	0.4215		Number of obs.		176
F-test	5.78		Prob>F		0.0001

7.2   Regression results for Pakistan

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	.105506	.0442333	2.32	0.030
BM	-.0751555	.060577	-1.24	0.227
LIR	-.132017	.0547142	-2.41	0.024
TO	5.09119	1.93691	2.63	0.015
FDI	-.097691	.379970	-0.26	0.799
_CONS	13.85071	5.60940	2.47	0.021
R-squared	0.7154	Number of obs.	29	
F-test	11.57	Prob>F	0.0000	

7.3 Regression results for India

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Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	.076083	.053205	1.43	0.067
BM	-.069372	.061448	-1.13	0.271
LIR	.255386	.104575	2.75	0.011
TO	.083214	.036106	2.05	0.052
FDI	.442282	.209087	1.60	0.122
_CONS	-.5116083	5.001313	-0.10	0.919
R-squared	0.422	Number of obs.	29	
F-test	3.36	Prob>F	0.0201	

7.4 Regression results for Sri Lanka

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	.134021	0.06178	2.17	0.041
BM	-.27986	.077394	-3.62	0.001
LIR	-.264243	.1080742	-2.45	0.023
TO	.5761284	1.88082	0.31	0.762
FDI	1.45417	.488567	2.98	0.0007
_CONS	-3.46987	14.9165	-0.23	0.818
R-squared	0.6373	Number of obs.	29	
F-test	8.08	Prob>F	0.0002	

7.5 Regression results for Bangladesh

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p>│z│
PSC	.128685	.062494	2.06	0.051
BM	-.015604	.0456731	-0.34	0.736
LIR	-.073920	.135717	-0.54	0.591
TO	.831377	1.35485	0.61	0.545
FDI	-.230901	.160622	-1.44	0.164
_CONS	14.74751	3.37951	4.36	0.000
R-squared	0.7035	Number of obs.	29	
F-test	10.91	Prob>F	0.0000	

7.6 Regression results for Nepal

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	0.108880	0.06481	1.68	0.045
BM	-.059931	.012162	-4.93	0.000
LIR	-.148306	.050552	-2.93	0.010
TO	5.64073	.601991	9.37	0.000
FDI	-.135749	.090070	-1.51	0.153
_CONS	-7.63117	2.33691	-3.27	0.005
R-squared	0.9341	Number of obs.	21	
F-test	42.54	Prob>F	0.0001	

7.7 Regression results for Maldives

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p> | z |
PSC	.027509	.0126237	2.18	0.040
BM	.084634	.029837	2.84	0.009
LIR	.145864	.096349	1.51	0.144
TO	2.12613	1.34090	1.59	0.126
FDI	-.4004	.164779	-8.50	0.000
_CONS	14.5375	7.56362	1.92	0.067
R-squared	0.94	Number of obs.	29	
F-test	78.23	Prob>F	0.0000	

7.8 Regression results for Bhutan

Dependent variable (SMEP)				
Variable	Coef.	Std. Err.	z	p>│z│
PSC	.029588	.015705	1.88	0.079
BM	-.057702	.019414	-2.97	0.009
LIR	.783832	.404160	1.94	0.071
TO	4.49867	1.42682	3.15	0.0007
FDI	-.073898	.162111	-0.46	0.655
_CONS	-19.90807	10.0307	-1.98	0.066
R-squared	0.5486	Number of obs.	21	
F-test	3.65	Prob>F	0.0234	