

**The Roles of Business Incubators and Entrepreneurial Finance in  
Entrepreneurial Development**



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**By**

**MUBASHAR ALI**

**Roll No. PHBA-F16-024**

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**SCHOOL OF MANAGEMENT SCIENCES**

**THE SUPERIOR COLLEGE LAHORE**

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Student Name: Mubashar Ali

Signature: \_\_\_\_\_

### **Examination Committee:**

a) External Examiner 1

Signature: \_\_\_\_\_

b) External Examiner 2:

Signature: \_\_\_\_\_

c) Internal Examiner:

Signature: \_\_\_\_\_

d) Supervisor Name: Dr. Samia Jamshed

Signature: \_\_\_\_\_

e) Name of Dean/HOD:

Signature: \_\_\_\_\_

## **DEDICATION**

This work is dedicated to my Parents, Wife, Children, Family and Friends because of their prayers and love I am successful in my life. May God give them a long and healthy life,  
Ameen.

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## ABSTRACT

The aim of the conducted research is to investigate the effects of business incubator services and entrepreneurial finance on entrepreneurial development, as well as the mediating role of business startups and entrepreneurial orientation (EO) between business incubator services and entrepreneurial development, and the moderating role of government regulations and social capital, particularly in Pakistan. A purposive sampling technique was used to collect data from the incubator services provider; in this technique, respondents are selected based on an expert's assessment or with a specific goal in mind. The acquired quantitative primary data from the respondents were subjected to statistical analysis. SPSS and SmartPLS were used for descriptive statistical analysis, convergent and discriminant validity, confirmatory factor analysis, and finally structural equation modeling. As far as direct relationships are concerned, SBI has a significant impact on BS, EO and ED, and entrepreneurial finance plays an important role in both the startup and the development of entrepreneurial sector. The reason for the insignificant impact of EF on BS is the lack of financial support from both individuals and government officials. On the other hand, entrepreneurial orientation plays a significant mediating role between SBI and ED as well as EF and ED. Because EO was associated with motivation, and other mediating hypotheses are accepted because of individuality and lack of support authorities. As mentioned previously, social capital and government regulation are used as moderating variable, which is a unique combination in which both micro and macro levels factor are used as moderating variables. The moderating result indicated that there is a significant role of social capital as moderating between EF and EO. In context to Pakistan government still planning to update their regulation to support business startup due to economic crises. But, as far as motivation are concerned, government play a significant role as moderator between entrepreneurial orientation and development. This study make a substantial contribution to the literature, offers empirical results, and emphasizes the significance of incubator centers in the development of entrepreneurship.

**Key Words:** *Services of Business Incubation, Entrepreneurial Finance, Entrepreneurial Development, Business Startups, Entrepreneurial Orientation, Social Capital and Government Regulations*

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## **List of Abbreviations**

AVE	average variance extracted
BIC	Batavia Industrial Center
Boot CI	bootstrapped confidence interval
CR	composite reliability
EM	estimation–maximization
EO	entrepreneurial orientation
GDP	gross domestic product
HEC	Higher Education Commission
HTMT	Heterotrait-Mmonotrait
IPO	initial public offering
LL	lower limit
MLE	maximum likelihood estimation
NGO	non-governmental organization
PITB	Punjab Information Technology Board
PLS	partial least squares
RBSO	Regional Business Service Organization
RBV	resource-based view
R&D	research and development
ROI	return on investment
SE	standard error
SEM	structural equation modeling
SME	small and medium-sized enterprise
TMT	top management team
UL	upper limit
VC	venture capital

# Chapter One

## Introduction

### 1. Background of the Study

During the last few decades, especially during the period of financial crisis (2007–2008) (Erkens, Hung, & Matos, 2012), many financial institutions and their support systems failed; even in developed countries, some credit markets failed to respond to individuals. While all enterprises were affected by the macroeconomic variables at the core of the financial crisis (e.g., loose monetary policy), some firms were harmed substantially more than others (Taylor, 2009). The worldwide financial crisis of 2008 led to a temporary slowdown in human activities and remarkable changes in developing and developed economies. For example, developed countries, including the UK and USA, initiated deliberate decisions to improve society and the economy by enhancing talent (Fritsch, 2013). These developed countries decided to focus on strengthening entrepreneurial activities to overcome the financial crisis. Li, Ahmed, Khan, and Naz (2020) suggested that business incubator centers play an emerging role in improving entrepreneurial activities; entrepreneurial development is considered an essential human activity (Scott & Hussain, 2019) that can improve living standards. Furthermore, the promotion of small businesses and entrepreneurial development increases economic growth (Acs & Virgill, 2010) by creating new jobs (Fritsch, 2013), which can resolve the issue of unemployment (Li, Ahmed, Khan, et al., 2020).

In the Pakistani context, entrepreneurial development needs significant attention because there is an upward trend in unemployment (5.6% or 6.5%) (Li, Ahmed, Khan, et al., 2020). According to the consensus on Pakistan population development every 10th individual in Pakistan is unemployed. Furthermore, every year this percentage is increasing<sup>1</sup>. Pakistan's unemployment rate is predicted to fall to around 4.45% in 2020, down from 4.65% the previous year. The global macro model of the US Bureau of Economic Analysis and other expert projections indicated that the unemployment rate in Pakistan was expected to reach 5.0% by the end of 2021. As reported by official figures, the projected expansion of the economy has almost eradicated the underground economy, with three out of four workers losing their jobs

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<sup>1</sup> *Global unemployment figures 2021*. (2021, June 2). Statista.  
<https://www.statista.com/statistics/266414/unemployed-persons-worldwide/>

between April and July of that year. Pakistan's labor market contracted by 13% in the April–June quarter of 2020, putting 20.7 million people out of work; according to a research study titled "Special Research Study for Evaluating Socio-economic and Demographic Impact of COVID-19 on People's Wellbeing," young workers bore the brunt of the impact.

To solve the problem of unemployment, educational institutions are accelerating business incubator centers for new startups. In the milieu of entrepreneurship, the main issue among entrepreneurs is the arrangement of finance for their new startup; this issue was confirmed by numerous studies that contributed to the literature on entrepreneurial finance (Ackermann, Bock, & Bürger, 2020; D. Cumming, 2007; Denis, 2004; Leach & Melicher, 2011). Entrepreneurial activities could increase economic growth, but these activities cannot be completed if finances are not available. The literature raised concerns about issues with crowdfunding and venture capital (VC) that support entrepreneurial activities in different sectors of the economy. Attention needs to be paid to external finance from corporate culture (Beck & Demirguc-Kunt, 2006) and developing and developed nations to promote small businesses and entrepreneurial activities (Berger & Udell, 1998).

A traditional incubator may have a wide range of stakeholders, including government officials, local community, affiliated colleges, new startups, business chambers and organizations, corporate development, and donor agencies. This diversity is an essential element in the incubator process and brings preferences and a combination of inputs (resources for our purposes). Access to a multitude of tools, such as easy access to government offices, cooperation with universities, networking with industry and other incubators, provision of subsidized legal services and other services of business development, and essential to the success of incubators. (Peters, Rice, & Sundararajan, 2004). Therefore, the participation of various stakeholders is essential for incubators. Since all stakeholders have their own goals and agendas behind their support for incubators, incubator efficiency refers to the degree to which each stakeholder's aims and objectives are met. In a broad sense, incubator performance includes the advantages and satisfaction that stakeholders gain from the incubator (Rustam Lalkaka, 2000). Given the variety of priorities and goals of the various stakeholders, it is challenging to establish a metric to assess incubator performance. For the same reason, as will be seen in the literature review (Chapter Two), there are no accepted benchmarks for calculating incubators' effectiveness.

The trend of entrepreneurship has been observed to be very low in Pakistan, as far as the modern concepts and practices of entrepreneurship are concerned (Haque, 2007). Incubator centers provide entrepreneurs with an opportunity to build a business by providing the resources. Both academics and politicians have emphasized that incubator enterprises, or new technology-based firms that are housed inside incubators, are a critical driver of innovation, technological monetization, and economic development at the local, national, and national levels and at all levels of government (Aaboen, 2009; Aerts, Matthyssens, & Vandenbempt, 2007; Clarysse, Wright, Bruneel, & Mahajan, 2014; Fonseca & Jabbour, 2012; Ratinho & Henriques, 2010; Schwartz & Hornych, 2010). Research has shown a wide range of performance and success across incubators and incubator enterprises, with a particular emphasis on the latter (Bergek & Norrman, 2008).

On a three-year sample, entrepreneurial orientation (EO) affected business efficiency (Miller, 2011; Wiklund, 1999). studied EO, which has recently been the subject of numerous studies. EO seems to be a virtue adopted by entrepreneurs who are proactive, dare to take risks, and are also innovative, and this has a link to organizational leaders' ability to recognize opportunities and make action decisions (Rahayu, 2018). EO is most important influencer to promote the entrepreneurial activities which directly effect the country's growth (Coviello & Munro, 1995; Eshima & Anderson, 2017; He, Meng, He, & Ge, 2018). There are several reports on EO in other contexts, but few studies seem to consider a direct relationship between EO and the services of business incubators. The goals of this thesis are to investigate the direct impact of entrepreneurship development services on EO and examine EO as a mediator between three separate variables under consideration. The data from this study will be used to inform future research. There is a scarcity of studies examining whether there is a direct relationship between EO and the services of business incubators; this research fills this gap in the literature.

## **1.1 Overview of Pakistan**

According to a National Human Development Report 2020 of the United Nations Development Programme, 27 million young people in Pakistan are currently looking for work, with the possibility of being groomed as tomorrow's entrepreneurs. Women make up the majority of the unemployed youth group, with barely one-third of men. Although the government of Pakistan has in recent times recognized the significance of entrepreneurship to the improvement of the country's economic status, it has not yet fully embraced it. As a result, there is a very alarming

situation in Pakistan: unemployment among fresh graduates. Most graduates are more inclined toward jobs in firms than entrepreneurial ventures. Beyond this perspective, there are several additional issues, such as a lack of institutional assistance, which contribute to Pakistan's low trend in the development of entrepreneurial activity (Chemin, 2010). Because of the growing significance of entrepreneurialism, the Pakistani government has made a number of efforts to improve the situation by launching training, career development, and other initiatives. Despite these efforts, the barriers to entrepreneurial activities in Pakistan remain, especially the lack of entrepreneurial intention among people. Fear of failure, lack of support from the government, lack of social capital, limited skills related to entrepreneurship activities, and lack of incubation trend in Pakistan are some of the major factors that hinder entrepreneurial development (Asif, Asghar, Younis, Mahmood, & Wang, 2018). It is frightening to note that Pakistan in 2016 was placed 138th among 189 nations in the world in the World Bank's evaluation of the ease of doing business; this is a significant factor in the decline of entrepreneurial activity in Pakistan (Muhammad, McElwee, & Dana, 2017). However, in the report of 2020, Pakistan's rank in ease of doing business improved to 108th rank. In particular, Pakistan achieved 72nd rank for ease of doing business for starting a new business, which is much better; however, improvements are needed to increase entrepreneurship activities in Pakistan. The rankings for different dimensions of ease of doing business are presented in Table 1.

**Table 1: Ease of doing business in Pakistan**

<b>Ease of Doing Business</b>	<b>Ranking</b>
Starting a new business	72
Dealing with construction permits	112
Getting electricity	123
Registering property	151
Getting credit	119
Protecting minority investors	28
Paying taxes	161
Trading across borders	111
Enforcing contracts	156
Resolving insolvency	58

*Source: World Bank (2020)*

According to the Global Entrepreneurship Index, (2019), among the total of 137 countries in the list, Pakistan is ranked 108th and the value of this rank is 17.3. This also shows that entrepreneurial activities in Pakistan are quite low and require much attention. In the same report, Pakistan was not even included in the 2018 list of total early-stage entrepreneurial activity, which also indicates the same issue. All these facts and figures point toward the importance of studying entrepreneurial development in the context of Pakistan (Asad, Ali, & Islam, 2014; Haque, 2007).

Recent literature evidenced the need to empower energetic youth through entrepreneurial activities (Khan, Rathore, & Sial, 2020; Khan et al., 2021); educational institutions can be a great source of this (Zubair & Khan, 2021). Researchers have reported that entrepreneurship is gaining prominence in developing countries because of its collective benefits (AKHTER, HOSSAIN, & ASHEQ, 2020; Luc, 2018, 2020) and especially to overcome poverty (Gupta, Chauhan, Paul, & Jaiswal, 2020). Aforesaid logics are the motivations behind universities' interest in entrepreneurial schooling plus activities (Aslam & Hasnu, 2016). Actually, scholars of entrepreneurship have shifted their interest toward entrepreneurship as a financial solution to problems of unstable economies (Alrawadieh, Karayilan, & Cetin, 2019; Bizri, 2017), including it as a means to dismiss poverty, by presenting entrepreneurial development as an effective tool. Accordingly, Zubair and Khan (2021) suggested that scholars and policy developers, especially in Pakistan, develop and provide lean startup strategies for youth to reduce monetary pressures when they provide fellowships to students. In Pakistan, incubators or facilitation centers are limited to specific industries (Zubair & Khan, 2021). Business incubation centers in the academic environment that promote academic entrepreneurial development are "not for profit" organizations (Aburahma, Amuna, & Aqel, 2020). Moreover, in the account for entrepreneurial development, most of the literature guidance to investigate the role of incubator services provider and financial issues which are directly linked (Polo-García-Ochoa, De Pablos Heredero, & Blanco Jiménez, 2020). In context to Pakistan; so, there is a need to focus on this sector to grow economic opportunities for graduates.

According to Zubair & Khan, (2021), today's students in Pakistan choose their career according to their nature and few of them choose to become entrepreneur. All accessible opportunities significantly impact students' career consciousness. According to a report published by the World Bank Group, Pakistan stands in the lowest ranked countries for taking entrepreneurial initiatives, specifically at 20th place in region, and last in the category for providing favorable

circumstances for “high potential” entrepreneurial development. It is therefore immensely important to study the opportunities for entrepreneurial financing and the role of incubation centers in entrepreneurial development, specifically in the academic institutions of Pakistan.

### **1.1. Problem Statement**

Pakistan is the sixth most populated country, and 60% of its population are under 30 years. This means that in Pakistan most people are young and they are searching for ways to make a living. According to the Pakistan Bureau of Statistics, since 2016, Pakistan’s unemployment rate shows an increasing trend from 3.79% to 4.45% (PBS, 2020). The International Monetary Fund reported that unemployment in Pakistan will increase by 5% in 2025. While the number of unemployed individuals is likely to increase considerably in 2021, reaching more than 220.5 million, the number of employed people is expected to decline to 205 million in 2022 (PBS, 2020). At first glance, unemployment is inefficient because unemployed workers do not contribute to the improvement of earnings. However, this is not the case. Unemployment is favored within a corporate capitalist system because it reduces profits, which are expenses from the perspective of the owners. Low wages, according to this perspective, benefit the system by removing economic rents. However, it does little to aid workers. Capitalist institutions unfairly abuse the labor market by prolonging unemployment benefits, which reduces workers' ability to demand decent wages and working conditions. Employees are pitted against each other for the sake of generating income for the company's shareholders (Wulan & Hermanto, 2019).

Looking at the current state of affairs in Pakistan, it is sad to have to report that a large number of people are out of work. Even individuals who are very talented, and some who have an excellent education and meet all of the criteria for a certain profession, are unable to get employment. Students' awareness of their job options is substantially influenced by any and all opportunities available to them. To remove unemployment, entrepreneurial development is necessary and this is possible via the creation of incubation centers and financial support.

Universities are expected to provide an atmosphere that encourages entrepreneurs to start their businesses in greater numbers over time. There are a large number of people with a highly creative brain who, nevertheless, are subjected to hefty borrowing costs on private loans in Pakistan. It is necessary for the government to implement programs that encourage and develop entrepreneurs. Entrepreneurs should indeed be encouraged to establish their own firms or to continue with their existing incubator enterprises.

The focus of this study is the development and application of entrepreneurship in Pakistan to resolve the problem of unemployment. There are two reasons why entrepreneurial development is considered essential for developing countries: high population growth and increasing unemployment, as cited in Li, Ahmed, Khan, et al. (2020). During 2019 and 2020, the number of unemployed people over the world increased by 220.3 million, representing the biggest annual increase in unemployment throughout this time period (PBS, 2020). Furthermore, researchers suggested including social capital as a moderating variable to warranty the model (Li, Ahmed, Khan, et al., 2020).

According to Ackermann et al. (2020), when there is a discussion of new startups it is essential to include entrepreneurial finance within a business incubator, because finance significantly impacts entrepreneurial development. According to a report published by the World Bank Group, Pakistan is ranked among the lowest of all countries for its entrepreneurial initiatives, specifically coming in last place in its region and last overall in the category of providing favorable circumstances for the development of “high potential” businesses. Therefore, it is of the utmost importance to investigate the possibilities of entrepreneurial finance and the role that incubation centers play in the growth of entrepreneurial endeavors, particularly within the academic institutions of Pakistan; this is the aim of this study.

Entrepreneurial development contributes significantly to economic development. Entrepreneurial development is a complex phenomenon affected by multiple factors. It is enhanced by different factors, such as business services, rules and regulations, and entrepreneurial finance (Loan, Quang, Tuan, Nghia, & Doanh, 2020). Business incubators and entrepreneurial finance play vital roles in the progress of entrepreneurial activities. Business incubators might provide professional business advice, network services, technology-related support, and other skills and training programs that might lead toward better entrepreneurial activities and an increase in their trend (Guerrero, Urbano, & Gajón, 2020). Business incubators are therefore contributors to the development of successful and sustainable entrepreneurial startups (Millette, Hull, & Williams, 2020). Business incubators provide mentoring and guidance by increasing support, promotion, and networking facilities while reducing the anxiety and fear faced by newly set up ventures (Wulan & Hermanto, 2019). Therefore, business incubators contribute toward innovative ways of initiation, development, and growth of entrepreneurial development. In the same way, entrepreneurial finance is also very important to give an initial push to the initiation and development of startups and new ventures; thus,

leading to entrepreneurial development (Fraser, Bhaumik, & Wright, 2015). Entrepreneurial development is thus affected by the availability of financial support as capital support enhances entrepreneurial confidence (Kee, Yusoff, & Khin, 2019). The role of business startups and EO is also quite important for this sort of entrepreneurial development (Cho & Lee, 2018). In addition to these aspects, favorable regulations for entrepreneurship from government and social capital might have a significant impact on the services of incubators and on entrepreneurial finance for entrepreneurial development (Neumeyer, Santos, Caetano, & Kalbfleisch, 2019). However, in Pakistan, the trend of business incubators is quite low and very few such incubators, which might provide beneficial help to entrepreneurs, can be found. Also, the entrepreneurs of Pakistan face the issue of lack of financial support for their startups, which demoralizes them, and they might give up; thus, impacting the entrepreneurial development of Pakistan negatively. In the same way, the lack of proper and favorable government regulations and low social capital have a negative impact on entrepreneurial development in Pakistan (Zreen, Farrukh, Nazar, & Khalid, 2019).

## **1.2. Research Gap**

In terms of the theoretical gaps to be anxious in the past literature, several studies explored entrepreneurial development in the context of different countries and some studies linked entrepreneurial development with business incubators in terms of training programs, business advice, network services and technological support (Sahban, Kumar, & Liba, 2014; Li, Ahmed, Khan, et al., 2020). However, very few studies were found in the literature in which the effect of entrepreneurial finance on entrepreneurial development was examined. A few studies investigated the impact of government regulations as a moderating variable in the entrepreneurial context, but there are not many pieces of research that took social capital being worried in the past as the regulating factor in the case of the impact of business incubation centers and entrepreneurial finance on entrepreneurial development (Li, Ahmed, Khan, et al., 2020). Saraireh (2021) assessed the effectiveness of the institutions working within an incubator and the aid and guidance these specialized technical organizations provide to assist them in reaching high growth rates. A few company incubators often act as technical incubators without walls, providing advice and support to new projects. These incubators are established by universities and conduct market research to find customers, entrepreneurs, and funding sources. The internal and external networks of a business incubator also have a positive effect

on the success of new ventures; EO plays a role in mediating this relationship (Wu, Wang, & Tsai, 2020).

Moreover, to the best of the authors' knowledge, there has not been much prior research in Pakistan on the aforementioned scenario (Zreen et al., 2019). There is a paucity of research on the entrepreneurial development services given by universities' business incubators and entrepreneurial finance (Polo-García-Ochoa et al., 2020). As a result, there is even less research on this topic in the context of universities in Pakistan; therefore, there is a need to focus on this area in order to increase the economic chances for graduates. Because of this, the researcher proposes to conduct a study to investigate the impact of services provided by business entrepreneurial ventures and entrepreneurial finance on entrepreneurial development, as well as the mediating role played by business startups and EO, as well as the moderating role played by government regulations and social capital, particularly in the context of Pakistan.

### **1.3. Significance of the Study**

This research fills gaps in the literature regarding the roles of business incubators and entrepreneurial finance in entrepreneurial development and provides support for the underlying hypotheses. It added to the current literature, and the outcomes of this study may be used to supplement the literature on entrepreneurial growth. The term resource is defined in both limited and broad ways in the resource-based view (RBV) framework. Bequests, inputs, fundamental resources, resource bundles, abilities, and inventories (Dierickx & Cool, 1989), and tangible and intangible assets, are all synonyms for the word "resource" (Penrose & Penrose, 2009). Tangible resources, such as plant, buildings, and finance, are tangible assets; intellectual, institutional, and social capital are intangible assets (Coleman, 1988); social capital includes all the components of human capital (Brush, Greene, & Hart, 2001; Coleman, 1988). Taking the given context into consideration, it can be stated that the entrepreneurial development and services of business incubators and entrepreneurial financing are all interlink the above-mentioned aspects of the theoretical context are illustrated by RBV theory. This research has an added dimension because it investigates whether EO mediates the connection among the services of business incubators and entrepreneurial development, and whether EO mediates the relationship between empire-building finance and entrepreneurial development. These can be considered to be the theoretical contributions of the proposed study.

The proposed study's practical implications or significance is as follows: the study will provide insight regarding the significance of services provided by business incubator centers (they can play an important role in supporting and helping entrepreneurs' develop creative and innovative ideas) so that the trend of these incubators can be increased in Pakistan. The proposed study will also provide insights regarding the importance of entrepreneurial finance; this is important for financial institutions so that they can develop plans and programs to support the new businesses planned by the entrepreneurs of Pakistan, thus leading toward entrepreneurial development. The government might also get insights regarding the importance of entrepreneurship in Pakistan and how regulations devised by them for entrepreneurs could encourage entrepreneurs and improve the development of entrepreneurial activities in Pakistan. The general public might also get insights regarding the importance of social capital, or the networks and relationships existing among people, to support EO and business startups, thus leading toward entrepreneurial development in Pakistan, all these are the practical implications of the proposed study. The provide the guidance to the policy makers and authorities to help the entrepreneurs as well as who want to start new business. Furthermore, this study also helpful for the government official to promote the incubator center as well as the high education commission to build incubator center in every public and private universities in Pakistan to build the intention as well as provide the opportunity under the head of microfinance. This study makes a number of important additions to the body of research already done in the subject of entrepreneurship. To begin, it fosters a better awareness of the function or significance of business incubators, the significance of government regulations to the growth of entrepreneurship, and the significance of government regulations to the launch of new businesses. Therefore, governmental and non-governmental organizations that implement the suggested method that is developed from the findings of this research will also contribute to the training of entrepreneurs in order to improve their chances of success and minimize the number of businesses that fail. The lawmakers and policymakers will get help and guidance on the issues that should be emphasized in the policy in order to enhance the overall quality of entrepreneurship and ensure its continued viability. In addition to this, it assists future scholars working in related fields by elaborating on areas of interest that need more investigation and a more in-depth examination. The research has the potential to assist recent graduates, provide them with the possibility for new ways of doing business, and provide light on the significance of specialized training in the process of encouraging entrepreneurialism.

Another thing that this article brings to the table is a conceptual investigation of the factors that are absolutely necessary for the growth of entrepreneurial spirit. Again, this assists in bringing the scattered body of literature on business incubators and entrepreneurship development into the larger context of the process of entrepreneurship. Additionally, it functions as a rough blueprint for future theoretical construction and testing, urging more rigorous and comprehensive examination of the factors that determine the effectiveness of entrepreneurial development. This document also helps the government adopt a unique set-up for awarding awards to the people and firms that investigate a new concept or test or produce a novel product or service. This may be accomplished with the assistance of this paper. The results of this study provide the federal government with the information they need to take the necessary step of establishing new commercial companies with key functions to attract external investors who will lend a helping hand to the local venture capital market with tax aids. These companies will have key functions to attract external investors. In conclusion, our research is relevant to real-world applications in two different ways. To begin, the results may provide public policy makers with assistance in determining the kind of institutional support and initiatives that are most effective in fostering the development of entrepreneurial endeavors and internationalization. Second, it continues the process of bolstering existing institutional frameworks and offering regulatory assistance to aspiring business owners.

The present research is necessary for incubator centers, policymakers, and practitioners because it offers practical recommendations and suggests how the services of business incubators improve entrepreneurial development. Secondly, this research will give insight into the crucial role of business incubators and entrepreneurial finance in entrepreneurial development. Moreover, this research will also address a new startup's problems, which will assist practitioners and policymakers to draft workable policies.

## **1.4. The Objectives of the Study**

### **1.4.1. Major Objective**

The primary objective of this research is to examine the impact of business incubators, entrepreneurship, innovation finance, and EO on entrepreneurial development. It will also look at the mediating importance of organizational capital and government regulations, as well as comment on the moderating control of organization-wide capital and government restrictions, especially within the context of Pakistani entrepreneurship.

### **1.4.2. Sub-objectives**

- To access the effect of business incubator services on EO and business startups.
- To determine the effect of business startups and EO on entrepreneurial development.
- To examine the impact of business incubators and entrepreneurial finance on entrepreneurial development.
- To examine the moderating role of social capital and government regulations.

### **1.5. Main Research Question**

- What impact do services of business incubators and entrepreneurial financing have on entrepreneurial development?

#### **1.5.1. Sub-research Questions**

- Is there any role of business incubator service on entrepreneurial orientation and business startups?
- Is there any effect of business startups and EO on entrepreneurial development?
- Is there any impact of business incubators and entrepreneurial finance on entrepreneurial development?
- Is there any moderating role of social capital and government regulations?

### **1.6. Research Hypotheses**

H<sub>1</sub>: Services of business incubators have a significant impact on business startups.

H<sub>2</sub>: Services of business incubators have a significant impact on EO.

H<sub>3</sub>: Services of business incubators have a significant impact on entrepreneurial development.

H<sub>4</sub>: Entrepreneurial finance has a significant impact on business startups.

H<sub>5</sub>: Entrepreneurial finance has a significant impact on EO

H<sub>6</sub>: Entrepreneurial finance has a significant impact on entrepreneurial development.

- H<sub>7</sub>: Business startups have a significant mediating role in the relationship between services of business incubators and entrepreneurial development.
- H<sub>8</sub>: EO has a significant mediating role in the relationship between services of business incubators and entrepreneurial development.
- H<sub>9</sub>: EO has a significant mediating role in the relationship between entrepreneurial finance and entrepreneurial development.
- H<sub>10</sub>: Business startups have a significant mediating role in the relationship between entrepreneurial finance and entrepreneurial development.
- H<sub>11</sub>: Social capital has a significant moderating role in the relationship between services of business incubators and business startups.
- H<sub>12</sub>: Social capital has a significant moderating role in the relationship between services of business incubators and EO.
- H<sub>13</sub>: Social capital has a significant moderating role in the relationship between entrepreneurial finance and business startups.
- H<sub>14</sub>: Social capital has a significant moderating role in the relationship between entrepreneurial finance and EO.
- H<sub>15</sub>: Government regulations have a significant moderating role in the relationship between business startups and entrepreneurial development.
- H<sub>16</sub>: Government regulations have a significant moderating role in the relationship between EO and entrepreneurial development.

## **1.7. Definition of Key Terms**

### **1.7.1. Business Incubators**

As defined by the International Federation of Business Incubators, business incubators are facilities that help new businesses grow during their early stages. In the proposed study, four dimensions of business incubators are taken into consideration: business recommendation, network management, technological support, and training programs. Business incubators have

been included in the proposed research because they are relevant to entrepreneurship (N. Allen, 1985).

### **1.7.2. Entrepreneurial Finance**

In the proposed study, the term entrepreneurial finance has been taken in the context of the financial needs and support required by entrepreneurial startups for the initiation of their businesses; this variable has been taken as a whole without any further dimensions (Paré, Rédis, & Sahut, 2009).

### **1.7.3. Entrepreneurial Development**

Entrepreneurial development has been taken in the context of the ability of individuals to identify business opportunities, to acquire the necessary resources, and to have the intention or willingness to start and sustain different entrepreneurial activities of the new startup. Although this variable has different dimensions in the literature in the proposed study it has been taken as a single variable (McOliver, 1998).

### **1.7.4. Business Startups**

Business startup refers to a group of people who are looking for and working at a repeatable and scalable business model and all this working is going on under extreme uncertain conditions. This variable has been taken as a single variable (Dorf & Blank, 2018).

### **1.7.5. EO**

In the literature, various dimensions of EO have been taken into consideration; however, in the proposed study, this variable is a characteristic of a person who is innovative, achievement-oriented, risk-taking, and proactive (McClelland & Mac Clelland, 1961).

### **1.7.6. Government Regulations**

Government regulations in the proposed study have been considered in the context of all the policies and regulations that are devised by the government, especially in the context of entrepreneurship development in Pakistan (Pryor, 2002).

### **1.7.7. Social Capital**

According to social capital theory, social capital is the sum of resources, either real or virtual, that a person or group acquires as a consequence of being a member of a long-lasting social network with somewhat institutional linkages of mutual understanding and platonic relationships (Bourdieu & Wacquant, 1992).

### **1.8. Thesis Organization**

There are five chapters in this thesis. The study backdrop, statement of the problem, research aims and questions, study importance, and definitions of key words are all addressed in this chapter. The second chapter presents a comprehensive assessment of the literature on the predictors of services of business incubators, entrepreneurial finance, entrepreneurial development, business startups, EO, social capital, and government regulations. Chapter 2 also includes a discussion of the underpinning theory that influences the relationship between services of business incubators, entrepreneurial finance, entrepreneurial development, business startups, EO, and social capital and government regulations. The conceptual framework and research hypotheses, which are predicated on the literature review, are given at the chapter's conclusion. Chapter 3 outlines the study's research methodology, which includes the demographics and sample design, research tools, methods for gathering data, and statistical techniques. among other things. The study's findings are presented in Chapter 4. Finally, in Chapter 5, the findings are discussed, including the study's implications, and recommendations for further research.

## **Chapter Two**

### **Literature Review**

#### **2. Introduction**

This study's objective was to look into the characteristics that impact entrepreneurial growth at university incubation centers in Pakistan. This chapter's objective is to evaluate the existing literature on the impacts of business incubation centers, entrepreneurial finance, and entrepreneurial growth. This project's primary purpose is to identify any possible gaps in existing information in order to get a better understanding of the elements that drive entrepreneurial growth. Section 2.1 discusses how to define entrepreneurial growth, how to conceptualize it, and what factors influence it. Section 2.2 presents a review of previous studies that have looked at the research variables. So as to illustrate the correlations between the variables evaluated, the study's underlying hypotheses are offered toward the end of the paper.

#### **2.1 Theoretical Review**

##### **2.1.1 RBV**

In the resource-based approach, an organization is considered a collection of resourceful people who work together to accomplish their goals (Perrose, 1959, 2009). As a consequence, according to this view, a firm's long-term economic benefit is derived from its capacity to obtain and efficiently use key resources (Barney, 1991; Teece, Pisano, & Shuen, 1997). Furthermore, Wernerfelt (1984) elaborate the term resources as some which can effect the firm rather its give firm boost or decline. On the other hand, Barney (1991) explore resources as capabilities, assets, attributes means tangible and intangible resource, both are create the impact on firms growth. While scholars disagree on how to define resources, the underlying premise is that resources are "the foundation for the implementation of company strategy (Hitt, Dacin, Levitas, Arregle, & Borza, 2000) and sources of competitive advantages" (Barney, 1991; Ireland, Hitt, Camp, & Sexton, 2001). The RBV is predicated on the assumptions that: (a) firms within a particular industry may have a wide variety of resources, and (b) those resources are inadequately movable within that industry (Barney, 1991). Some of those resources are valuable because of the variety of resources and their imperfect mobility, scarce, imperfectly imitable, and difficult to replace (Barney, 1991). Because a company's resources

might only serve as a source of a competitive advantage or a sustained competitive advantage if they are valued, the most fundamental attribute of a company's resources may be the degree to which they provide value to the performance of an organization (Barney, 1991). The value of return on resources would be considerably enhanced if a fewer number of competitors owned such precious resources (Barney, 1991). As a result, significant resources may not provide a competitive advantage to firms if they are readily available to competitors (Miller & Shamsie, 1996). Rather than gaining a temporary competitive advantage based on resource value and rarity, a sustainable competitive advantage can be acquired if resources exhibit characteristics such as imperfect imitability (Lippman & Rumelt, 1982) and substitutability (Barney, 1991). Substitutability refers to whether or not there is another resource that can provide deliberately equivalent results (Andreu & Ciborra, 2009; Barney, 1991). To summarize, a resource's capacity to contribute to competitive success is a function of how precious, rare, inimitable, and non-substitutable it is (Barney, 1991). The one of the main contributions is entrepreneurial orientation, and Barney (1995) considered it as main characteristics of the organization addition to the resource attributes, arguing that the greatest competitive advantage can be realized whenever an organization is successful in utilizing the available resources and that institutions can overcome the issue of substitutability through management. Resources include not only real assets, but also intangible assets, such as closeness to markets, knowledge sources (universities), and clustering effects, similar to those seen in a work group. It is suggested that the influence of these resources on the business results in access to fresh knowledge, expertise, and networks, which helps in entrepreneurial development.

### **2.1.2 Categorization of Resources**

Understanding the incidence of a resource by classifying it, and creating a profile of a company's resources centered on that categorization, may aid in understanding the resource (Grant, 1991; Mahoney & Pandian, 1992). The categorization of resources may aid managers to visualize their commanding advantage within a certain industry (Teece et al., 1997). It was decided to classify resources into three categories: physical financial capital, human resources materials, and overall organizational financial investments (Barney, 1991). Scholars have proposed other or extended categorizations in addition to this well-known categorization, according to Chrisman, Bauerschmidt, and Hofer (1998), to the preceding five elements, (Grant, 1991) added a sixth factor called reputation, which he defined as "individuals' knowledge and emotions about a product range" (Hall, 1992). Shapiro (1999) proposed that

human capital is the most important resource for incubation centers (Barney, 1991; Mahoney & Pandian, 1992), for example, patents and contracts. Shapiro's contribution is the addition of the categories of marketing and legal resources that earlier researchers had overlooked. The inclusion of a special concept of key factors to propel growth is recommended, according to experts (Alvarez & Busenitz, 2001; Mosakowski, 1998). Entrepreneurial aptitude, according to (Godfrey & Hill, 1995), is the ability to discover, and create the new opportunities and also provide the guidance to build the assets.

Management studies have revealed that firms need four to six key kinds of resources to design and execute strategies. These categories are listed below. Barney and Arikan (2002) distinguished financial, physical, human, and organizational capital from technological capabilities (Hofer & Schendel, 1978; Lichtenstein & Brush, 2001); and, most importantly, social capital resources (Barney, 2002; Barney & Arikan, 2002). The competitive advantage imparted by valuable, rare, inimitable, and organizational resources has been the subject of modern RBV research (see Barney, 2002). This new research owes a lot to Penrose's landmark work from 1959. She focused on company growth and conceptualized firm growth using assets as the basic unit. Penrose (1959) described a firm as a collection of resources; a collection of human and other living resources organized around an administrative framework that gives the company its cohesive character. The particular combination of resources that a company possesses and deploys determines its growth (Penrose, 1959). When combined with evolving management knowledge, underutilized productive resources give unique potential for growth (Penrose, 1959; Castanias & Helfat, 1991; Henderson & Cockburn, 1994; Teece, Pisano, & Shuen, 1997). The growth process involves configuring and reconfiguring different types and mixtures of resources (Penrose, 1959).

According to the Penrosean (1959) approach, human, physical, financial, organizational, and social resources which help in the growth of business (Bamford, Dean, & McDougall, 2000; Bruton & Rubanik, 2002; Watson, Stewart, & BarNir, 2003; Wiklund & Shepherd, 2003; Mishina, Pollock, & Porac, 2004). Firm expansion is limited by resource weaknesses and specific shortcomings (West & DeCastro, 2001), and, in some cases, a firm's viability is threatened (Thornhill & Amit, 2003). The founding team and/or the top management team (TMT) are critical components of the human resources of an entrepreneurial organization. Various founding team traits (Eisenhardt & Schoonhoven, 1990) and TMT attributes, such as industry and business-specific experiences (Siegel, Siegel, & MacMillan, 1993; Kor, 2003;

Park & Bae, 2004), as well as social networks, are favorable to firm growth (Collins & Clark, 2003). TMT completeness, coherence, and integration (Ensley, Pearson, & Amason, 2002; Reuber & Fischer, 2002) are crucial for business growth (Bamford, Dean, & Douglas, 2004). Human resource management strategies, such as stressing high talents, allowing employees to participate in decision making, offering incentives, building interpersonal processes, and matching people to the company culture, are all examples of this (Snell & Youndt, 1995; Heneman, Tnasky, & Camp, 2000; Batt, 2002; Collins & Clark, 2003; Watson, Stewart, & BarNir, 2003). In terms of financial resources, VC funding (Davila, Foster, & Gupta, 2003; Chang, 2004) and private equity placements (Janney & Folta, 2003) have been linked to rapid expansion. The total cash flow of an entrepreneurial organization is one of the most essential factors of the organization's development (Brush, Bromiley, & Hendriks, 2000), and, in general, more financial resources lead to more growth (Bamford, Dean, & McDougall, 2000).

Researchers have recently begun to move away from a traditional Ricardian (Ricardo, 1817) perspective and move toward a more dynamic one, exploring the interconnections among different resource bundles in the developmental process (Florin, Lubatkin, & Schulze, 2003). A new study stream has arisen, and it is linked to growth life cycle/stage models. This stream emphasizes resource-based sequencing models and embraces the resource-based perspective (Pettus, 2001). Brush, Greene, and Hart (2001) used a resource development route and a resource hierarchy model to describe the rise of entrepreneurial development. The resource development pathway's basic steps are to: (a) identify important resource demands and sources, (b) assemble (owner's) resources, and (c) acquire and combine resources (through social resources). Brush and colleagues (2001) suggested that in order to generate a company-level distinctive advantage, the entrepreneur (as well as entrepreneurial partnership) must transfer individual resources to the firm and convert these financial assets into organizational resources. A business that does not transition from relying on the founder's personal resources to creating organizational resources will expand slowly (Brush, Greene, & Hart, 2001). Garnsey's (1998, 2002) model, which is also related to resource-based reasoning, is one of the most knowledge and competence, saw entrepreneurship as a three-step process: (a) gaining access to resources, (b) mobilizing resources, and (c) generating resources. Garnsey's (2002) growth path model is based on this sequential process viewpoint, with steady growth, early failure, oscillating stability, and a growth reversal phase. This model is less unpredictable in this sense, because enterprises can advance to more growth, a stagnation, and growth reversal at any point in the process. The development path models developed throughout this research stream (e.g.,

Garnsey, 2002), which are based on Penrose's (1959) original arguments, offer theoretical explanations for resource-based development, adding significantly toward the configuration of entrepreneurial development framework models mentioned in this sub-section. This research uses Penrose's (1959) description of a firm as a collection of resources to conceptualize firm growth as a dynamic resource-based sequencing process (e.g., Brush, Greene, & Hart, 2001; Pettus, 2001; Garnsey, 1998, 2002). As a result, the resource-based perspective serves as a foundation for the conceptual framework.

### **2.1.3 Resources, Both Tangible and Intangible**

The lists of resources divided into different types in Section 2.1.2 are comprehensive; they cover both physical and non-physical resources, as described by scholars (Carmeli, 2004; Hall, 1992, 1993):

*All physical assets that the organization owns, such as facilities, raw materials, and other equipment, are considered tangible resources. All items not apparent in the material reports (balance sheets), such as organizational culture, reputation, and internal control, are considered intangible resources. (Carmeli, 2004. p25)*

Tangible resources, according to (Carmeli, 2004), are adaptable, easily obtained, and/or imitated, but intangible resources are inflexible by definition. As a result, “intangible, rather than tangible, resources can provide competitive advantage. Investment in non-residential constructions are also considered tangible assets (El-Deiry et al., 1995). The definition and categorization of derivative instruments are highly contentious topics of discussion. According to the authors the relationship between the sources are very (Young, 1998). "An identified is what intangible assets are. To characterize this form of investment, various classifications and typologies have been offered. As defined by Young (1998), intangible investment may be divided into three categories: a). computer-related human resources company organization; b). sales and marketing; c). and industry-specific research and development (R&D). Haskel et al. (2012) recently proposed a new typology that incorporates computerized information, innovation properties, and economic competences as intangible investments. The study of intangible investment behavior is becoming increasingly important in determining the total amount of investment (Marrocu et al., 2012). According to Corrado, Hulten, and Sichel (2005), investing in intangible assets has lately surpassed expenditure in tangible assets in the UK and the USA. Nonetheless, despite the fact that intangible assets are theoretically relevant to

business development, gross domestic product (GDP), and employment, an empirical study of intangible assets is still lacking (Corrado et al., 2005, 2009; EC, 2011; Haskel et al., 2012; Marrocu et al., 2012). Timmer (2011) claimed that "if we wish to comprehend the implications of intangibles on growth in the economy, perhaps a new approach is necessary to replace traditional growth accounting," and Corrado (EC, 2011) concurred, arguing that "there is a significant void" in intangibles accounting. There are several approaches to studying intangible assets.

#### **2.1.4 Economic Theory of Entrepreneurship**

Various entrepreneurship theories have been proposed by scholars, for example, in 1949, Schumpeter specified an entrepreneur as an individual who initiates and assists in the continuation of the growth process through the economy's circular flow. According to Mahmood, Jamil, and Yasir (2020), business incubation offers a good number of successful ways to start business strategies to encourage community entrepreneurship and new business startups to facilitate job development schemes, as well as facilitate market diversification. It promotes growth and functions as a growth hormone. Business incubation is a revitalization agent that facilitates the transition to business ownership in rural or distressed areas for students and staff looking for new opportunities. The primary focus of business incubators should be on office space, together with a diverse range of low-cost and no-cost business programs designed to assist innovators in the early phases of their commercial operation (Al-Mubarak & Busler, 2011). According to Campbell (1989), business incubators offer opportunities for entrepreneurs to grow their businesses by trying to combine training and education with an emphasis on entrepreneurship, related industries, management, and the new skills required; they also offer strength and conditioning for small business employees involved in the business incubation or expansion in a neighborhood. As indicated in the literature, determining business intelligence efficiency is challenging due to the lack of a universally accepted standard for doing so.

According to (Eshun, 2009) government considered as important element while business incubator performance is evaluated. As indicated by Kwapisz (2019), government policy on entrepreneurial activities is targeted at encouraging entrepreneurship by cultivating a profitable climate for entrepreneurs. In order to make this feasible, norms for governing entrepreneurial activity in a nation have been established. Given the fact that entrepreneurship serves as the

cornerstone for the state's economic development strategy, Perspective by (Saberi & Hamdan, 2019) the government control is appropriate because entrepreneurship is a risky business regardless of the administration in office, be supposed to be effectively enforced to achieve the guiding goals, which are always absent. As a result, proposed a novel conceptual model for investigating the role of business incubators. The current era appears to be an era of entrepreneurship (M. C. Becker, Knudsen, & Swedberg, 2012); entrepreneurship is especially appealing to young people with a relevant education. The notion of entrepreneurial is becoming more popular and it has attracted the interest of many people.

The origins of entrepreneurship may be traced all the way back to the Egyptian pyramids (Hisrich & Ramadani, 2018). Entrepreneurship is defined as the accomplishment of something fresh and tangible. Creating money in the form of commodities and services, as well as promoting social welfare, are the two main goals of economic development. As time has passed, it has expanded to include topics like environmental preservation, ethical and valuation business practices. It is being on the cutting edge of something new and exciting, pushing current society to new heights in everything from essentials to comforts to luxuries, to amazing and beyond, such as the construction of space colonies, among other things (G. Ahmed, 2016). In a survey of the entrepreneurship and innovation aspirations of young people in the United Arab Emirates, it was discovered that the benefits of independence, empowerment, and power, as well as social effectiveness and employment, and wealth creation for oneself and society, were the most appealing aspects of entrepreneurship (Ahmed, 2017; Ahmed & Kumar, 2015). Entrepreneurship can also be run on model lines, making it a multifaceted endeavor. New ventures, small and micro-sized businesses, nanotechnologies, and related goods look to be part of a continuing entrepreneurial revolution, which may be used to spur economic development and alleviate poverty in developing countries.

Entrepreneur is a French word that literally translates to 'between-taker' or 'go between'" (Hisrich & Ramadani, 2018). Those who are entrepreneurs are by nature "go-getters," people who push the business world ahead by making it so much more productive, cost-effective, inexpensive, and abundant than it was before. Entrepreneurship is a risk-taking, economic expansion activity that is both dynamic and unpredictable. "An entrepreneur is eager to chase opportunities in situations that others regard as challenges or threats (Schermerhorn Jr, 2008).

In the development of entrepreneurship, Joseph-Alois-Schumpeter (1883–1950) is generally recognized as a trailblazer for proposing a profound theoretical background to entrepreneurship

around the start of the twentieth century, which is largely acknowledged as an important development in entrepreneurship theory. It is still popular today, more than a century after it was first published, since it is the forerunner of subsequent entrepreneurship models that highlight entrepreneurialism as an all-encompassing business activity that includes strategy, financing, and production (among other things). Schumpeter's thesis of entrepreneurship, above all, was a watershed in the history of entrepreneurship since it involves bearing responsibility for the success or failure of a business (Schumpeter, 1949). Entrepreneurship, according to Schumpeter, consists of more than merely founding businesses and operating them successfully, which is undoubtedly a static or stagnant understanding of the nature of entrepreneurship. Schumpeter's thesis is derived from the famous theory of economic growth, which heralded the beginning of a new age of economic development characterized by entrepreneurial activity. According to this, the free enterprise system is highly adventurous and dynamic, always reaching new heights in business via the introduction of new goods and services (Ahmed, 2017; Ghannajeh et al., 2015). Entrepreneurship is a source of innovation and serves as a growth engine. Schumpeter stressed the role of the aspiring innovator, the innovator, the developer, and the promoter, the person who initiates and recognizes technical advancements and succeeds in bringing them to market (Mehmood, Alzoubi, Alshurideh, Al-Gasaymeh, & Ahmed, 2019). To put it another way, innovators are businesspeople whose major duty is entrepreneurship. According to Samuelson (1980), entrepreneurship serves as the source of all commercial innovations and improvements, and as the fundamental source of economic development (Mehmood et al., 2019). Thus, entrepreneurship innovations business, and economic development are the steps in the economic development process. Schumpeter's ideology is "innovate or perish" "There is the will to resist the impulse to battle, to prove oneself superior to others, to succeed for success itself, not for the fruits of success, but for the sake of success itself... or just for the sake of using one's energy or ingenuity," (Schumpeter, 1969). "Because being an entrepreneur is not a vocation and thus not a long-term condition, entrepreneurs do not form a social class in the technical sense, as, for example, landowners, capitalists, or workers do," it is said. Of sure, for the successful entrepreneur and his family, the entrepreneurial function will lead to specific class positions" (Schumpeter, 1969). "Like the Marxist capitalist, who accumulates for the sake of accumulation, the Schumpeterian innovator innovates, at least in part, for the sake of innovating" (Adelman, 1961). The achievement of something novel and measurable is the essence of what we mean when we talk about entrepreneurship. The creation of new wealth in the form of goods and services, as well as the enhancement of existing communities' quality of life, are the two primary objectives of

economic growth. Over time, it has grown to include a wider range of themes, including ethical and valuation corporate practices, as well as environmental preservation. Being on the cutting edge of something new and exciting, pushing current society to new heights in everything from essentials to comforts to luxuries, to amazing and beyond, such as the construction of space colonies, among other things, is an example of what it means to be at the forefront of something innovative and fascinating.

Innovation, which is defined as "the introduction of anything a new idea, method, or device," is at the heart of Schumpeterian entrepreneurship. Innovation is critical to the economic success of any firm, an area of the nation, or a whole country's economy. As technology progresses, old goods lose their manageability, and old industries begin to dwindle in importance. Any socioeconomic unit's future rests on the inventions and innovators that have gone before them. According to legend, Thomas Edison remarked that inventive genius is "1% inspiration and 99% perspiration" (Hisrich & Ramadani, 2018). Enterprises keep floating and progressing thanks to innovation (Peters, 1997).

Companies must always be on the lookout for new business prospects in the form of new factors, processes, and products (Mehmood et al., 2019). Profit and public acclaim are the rewards for entrepreneurial efforts in an organization and innovation. However, according to O'Boyle (2017), the Schumpeterian entrepreneur is more than just an economic, management, or home entrepreneur; that is, entrepreneurs are motivated by more than only profit since their accomplishments and innovations are motivated by higher and non-monetary values. Better success, social assistance, poverty elimination, and supporting the less fortunate are all achievable goals. Innovation, as represented by changes in raw materials, equipment, labor, finances, products, and so on, over time, is related to Schumpeterian entrepreneurship.

### **2.1.5 Services of Business Incubators**

Business incubation fosters entrepreneurial growth by providing startups with a network of contacts through which they may establish business ties. Incubators aid entrepreneurs to start their enterprises by providing technical support, training, infrastructure, administrative assistance, and mentoring to help them succeed. Startups that lack the financial resources to evolve into a fully-fledged firm rely on these features to ensure their existence. Entrepreneurs do not have to worry about anything since incubators offer workspace, furnishings, legal services, and back-office services. A research study conducted by Meru et al. (2011) to

determine entrepreneurs' perceptions of the value of business incubators in Kenya discovered a statistically significant association among the variables. According to a survey conducted in Spain, the services provided by business incubators fell short of renters' expectations (Gianiodis & Meek, 2020). According to Seoane (2014), business incubators are being used to study the influence of education and gender on entrepreneurship. Seoane (2014) reported that incubators can assist incubates in the creation of their own firms in Galicia, despite the reality that perhaps the great majority of people favor public service employment over entrepreneurship. Researchers in Brazil have discovered that incubators have been considerably successful in terms of evaluating for excellence with a specific industry focus, rigorous evaluation and monitoring of eggs and sperm' progress, and subsequently a shift toward financial sustainability in the context three years after they were established. In addition, business incubator center play the significant role for the financial sustainability of entrepreneurial and BIC provided the opportunity to access the funding, (Lalkaka, 1997; Jorge & Rivera, 2007).

Universities offer entrepreneurial education to future societies. Entrepreneurship thrives in ecosystems in which a diverse range of competitors play critical roles, which would include regional and global, national, regional, and municipal governments, individuals, but instead UN armed forces such as non-governmental organizations (NGOs) and entrepreneurs, as well as entrepreneurial education institutions and corporations gu. Academic institutions have an important role in the development of young people's perspectives, abilities, and behavior. However, people outside academia have an important role in creating official and informal educational initiatives, as well as in reaching out to underserved and disadvantaged sections in society. In this environment, collaboration and multistakeholder alliances are vital (Gianiodis & Meek, 2020).

In business, incubation refers to the process of providing fledgling companies with access to a network of connections in order to facilitate the development of commercial relationships among the companies involved. Incubators provide assistance to aspiring business owners in the form of technical support, training, infrastructure, administrative assistance, and mentorship in order to increase the likelihood of the entrepreneurs' businesses becoming successful. Startup companies that do not yet have the financial resources necessary to develop into fully-fledged firms depend on these characteristics to guarantee that they will continue to

exist. Incubators provide services like workspace, furniture, legal assistance, and back-office support, so entrepreneurs do not need to be concerned about anything.

Buss discovered that no optimal policies or methods" were mentioned, and that "determining the optimal may be unachievable. They go on to make a key suggestion for an institution that is thinking about launching an incubator: Even if they share many of the same corporate development goals, what works in one incubator may not work in another. The originality of each incubator appears to be largely linked to the local entrepreneurial ecosystem as well as stakeholder demands and resources. As a result, managers must gain a thorough understanding of their entrepreneurial surroundings and carve out a niche within them. Managers must wait patiently for their ideas to bear fruit, and if their efforts appear to be yielding benefits, a larger facility will yield even better outcomes. Clients can "operate with like-minded organizations, which can provide a wealth of practical knowledge that's vital for fledgling firms, according to Britt, who was describing a technological incubator in Oakland, CA (p. 29). However, Allen and McCluskey (1990) struggled with how to research and analyze this synergism, and how to go beyond simply listing incubator services to measuring "service quality and how quality services might best be given." Mian (1996) evaluated two different university projects at the UNC and CWR, focusing primarily on university business incubators. He gathered feedback on the services they valued from 12 incubator-graduated companies. He came up with some intriguing conclusions. He noticed that university staff were largely uninterested in either offering or receiving services (the incubator managers assisted firms who applied to be part of the incubator from outside the university). According to Mian (1996), among the attributes most highly valued by the firms were access to basic business services and being located in an incubator connected with the university's image. In comparison to student employees or faculty consultants, the entrepreneurs used the university library and lab resources significantly more frequently. The entrepreneurs in both incubators used the more sophisticated business support, such as accounting, marketing, and company plan creation, less than the fundamental business services. This could be because both institutions were still building solid intellectual property and technology transfer procedures, as well as professors' uncertainty about how their collaboration with the incubators would affect their rank, tenure, and personal burden. Policies designed for incubators and the services they provide could fill many books (Tomatzky, 1996; Hayhow 1996), but the analysis that follows focuses on a few key aspects. What services to supply is determined by what services are demanded, which is determined by what types of businesses are permitted to use incubator facilities and services. The term "high technology"

incubator is often used, yet it is difficult to define. If a "high technology" company is defined as one that uses a computer and the internet, then nearly every company qualifies. Although the subject of how to focus incubator services is crucial from the onset, the majority of the literature emphasizes the importance of thoroughly evaluating incubator applications.

Universities offer entrepreneurial education to future societies. Entrepreneurship thrives in ecosystems in which a diverse range of competitors play critical roles, including regional and global, national, regional, and municipal governments, individual people, and intermediaries such as NGOs and businesspersons, as well as entrepreneurship and innovation academic institutes and corporations. Academic institutions have an important role in the development of young people's perspectives, abilities, and behavior. However, stakeholders outside academia have an important role in creating official and informal educational initiatives, as well as in reaching out to underserved and disadvantaged sections in society. In this environment, collaboration and multistakeholder alliances are vital (Gianiodis & Meek, 2020). Gianiodis & Meek discovered, despite their age, continue to be significant. They came to the conclusion that there was no discussion of any "ideal policies or techniques," and that "determining the optimum may be impossible to achieve." They go on to offer a significant recommendation for an institution that is considering starting an incubator, which is that even though the institutions share many of the same corporate growth objectives, what is successful in one incubator may not be successful in another incubator. It seems that the local entrepreneurial environment, in addition to the requirements and resources of stakeholders, is a significant factor in the uniqueness of each incubator. Because of this line of thinking, managers of business incubator centers are required to acquire a detailed understandings of the commercial or entrepreneurial environment in which they work and carve out a specific place for themselves within it.

Incubation is a way of assisting firms in their growth and development throughout their early stages of operation. Moreover, business incubators assist entrepreneurs in establishing their new businesses at a minimal cost while also increasing the startup's conviction and ability to manage the new venture. They also offer the entrepreneur the required networking opportunities and tools for launching and expanding a viable venture. Entrepreneurs are accepted into company incubators for a set period of time until they achieve their target profit or sales income (Ali, & Talha 2021). Even in the presence of a supportive environment, in the early phases of startups, it is difficult to recognize which will develop significantly in the future.

By investing in management rather than merely ideas, business incubation acts as a venture capitalist. This could be due to the fact that both institutions were still in the process of constructing robust intellectual property and technology transfer procedures, as well as the fact that professors were unsure of how their collaboration with the incubators would affect their rank, tenure, and personal burden. Although the policies developed for incubators and the services they offer might easily fill several volumes (Tomatzky, 1996; Hayhow, 1996), the study that is presented here will concentrate on a select few critical areas. Which services to provide will be decided by which services are in demand, which will be defined by which sorts of firms are authorised to utilise the incubator's premises and services. Although the phrase "high technology incubator" is used rather often, its definition remains elusive. If a "high technology" firm is defined as one that utilises a computer and the internet, then the majority of businesses today meet the criteria for this category. Even while the topic of how to concentrate incubator services is critical from the very beginning, the bulk of the research highlights how important it is to evaluate incubator applications in great detail.

### **2.1.5.1 Client Selection and Screening in Incubators**

Hayhow's (1986) *A Comprehensive Guide to Business Incubation* addresses the issue of eligibility for incubator services. These two books are incredibly useful in describing the true work of incubator management and their advisory committees: selecting the most promising companies to become the incubator's clients. Kalis (2019) given an overview of several initiatives, some of which are university incubators and others that rely only on university resources. The Atlanta Technology Development Center in Atlanta, GA, puts a lot of pressure on the approximately 100 applicants it considers each year by requiring an extensive application, a complete business plan, and numerous interviews, but they want to narrow the list down to the three or four best companies to incubate. "If it forces them to address all elements of their business, to think through their business plan, and to do the correct things upfront, it's far easier to start them on the right path than it is to fix things in their second year." A screening committee made up of individuals familiar with the business the would-be incubate is joining is used by several different incubators, as described by Kalis. Goldman's remark that "We devote a significant amount of academic resources to conducting the appropriate market evaluation and industry-structure studies in order to determine whether the firm is a good fit for us" serves as a reminder that, even if it is a non-profit organization, an incubator is a business with particular aims and stakeholders to which it is answerable. This university

incubator, like venture capitalists, makes every effort to ensure that the technology is sound, the market opportunities are strong, and that it is a good investment opportunity, with a special emphasis on startups with "high growth potential" (Khan, 2020). Surprisingly, Incubator Services and International Students ISIS does not engage in the practice of selling space at a discount. In fact, their rentals are more than the going rate for comparable space in the neighborhood. "This keeps us clear of complications with local landlords" (Goldman). It maintains a high level of client quality. Our rental charges present a hurdle to the entrepreneur at the diagnostic stage: the entrepreneur must find the money to pay for it." ISIS and other groups frequently offer provisional entry into the country.

Business incubators have a long and illustrious history; the first incubator is thought to have been established in New York, USA. Back in 1959, the Batavia Industrial Centre (BIC) was an established business that had experienced rapid expansion (Baruteau, Meru, & Paardekooper, 2011; Blumberg, Lewis, & Sokoloff, 2002). Incubators were popular during the 1980s and 1990s; globally, there are between 5000 and 7000 business incubators (Berrell & Lilai, 2009; Rustam Lalkaka, 2001; 2003; Vaisar et al., 2007). BI defined by the National Business Incubator Association as a "business assistance mechanism that accelerates the successful development of startups and fledging enterprises by providing entrepreneurs with a diverse variety of targeted resources and services." Incubators include university-based/linked incubators, government-run/supported new ventures, and commercial incubators, to name a few examples. Business incubators are also classified according to their specialist sectors, such as a technology incubator or a mixed incubator, which caters to tenants from several business sectors and industries. Besides that, micro-enterprises differ in terms of their organizational structures, policies, property owners, management, financial resources, and performance, in terms of whether or not they achieve the objectives for which they were founded, as well as best practices in incubation, among other things (Al-Mubarak & Busler, 2012; Rustam Lalkaka, 2002; Pineda et al., 2011). The role of business incubators has evolved from merely providing workspaces and shared facilities, such as phone lines, internet access, administrative support, meeting rooms, and basic soft furnishings, to also providing business development services, which include coaching, marketing strategy, learning to write, accounting and tax support.

Since the mid-nineteenth century, when unemployment rates were high in the UK due to the Great Depression, which led in a significant fall in industrial sectors, business incubators have

been around to help entrepreneurs start their own businesses. During that period, it became evident that novel tactics were required to assist in the restoration of industrial income levels and the stimulation of entrepreneurial behavior in economies. Researchers found that guidance and training services are essential services offered by business incubators. Training is thought to be important for continuous learning and skill development, as well as success (Somsuk & Laosirihongthong, 2014). Business incubators provide their customers with professional advice, network services, technological support, and training program services, according to previous studies conducted to evaluate the performance of their services. The best thing about them, according to the studies, is that they provide customized products and services to meet the specific needs of each business owner. Incubators have been found to aid in the development of an entrepreneurial community. academia, finance services, business associations, major corporations, and federal agencies serve as promoters for the growth of consistent business and support networks. However, to provide successful services to companies, the qualifications and experience of incubator workers are very relevant; this is because if an incubator's workforce lacks specialized expertise and skills, then it will build a vicious cycle of low-skilled workers (Jamil, Ismail, Mahmood, Khan, & Siddique, 2015; Somsuk & Laosirihongthong, 2014).

Business incubation services are separated into three categories: pre-incubation, incubation, and post-incubation. Each category includes different processes and procedures that govern the connection between the incubator and the incubatee (tenant). The process of attracting, applying for, and assessing potential incubator tenants is known as pre-incubation. Among some of the terms and conditions are the arrangements on rent payment, the length of time spent in the incubator, and usage of the amenities. Guidance covering idea creation to the design phase to commercialization is provided via the incubation process. Incubator services provider are very helpful to established the network, and provide different consultancy in the business growth, and also provide the help to stay in the market. performance indicators on progress reporting, gap detection, and closure may be achieved with the assistance of key performance indicators. After tenant businesses have graduated from the incubator, the incubator team monitors their growth and maintains relationships with the prior tenant enterprises during the post-incubation period. This is frequently accomplished digitally, through personal visits, or through invites to incubator lectures and workshops.

### **2.1.5.2 Business Advice**

Researchers found that training and advice services are essential services offered by business incubators. Training is thought to be important to the success of entrepreneurs (Somsuk & Laosirihongthong, 2014). In accordance with previous studies based on business performance, business incubators provide their customers with business advice, core networks, technological support, and training program services. However, the most outstanding feature of their services is that they are tailored to meet the specific requirements of each business owner. Incubators have been shown to be beneficial in the creation of a thriving entrepreneurial culture. Several institutions, including universities, financial services, business schools, business groups, big enterprises, and government agencies, contribute to the development of coherent business and support systems. However, to provide successful services to companies, the qualifications and experience of incubator workers are very relevant; this is because if the incubator's workforce lacks specialized expertise and skills, then it will build a vicious cycle of low-skilled workers (Jamil, Ismail, Mahmood, et al., 2015; Maltby, 2013). The primary concern of business incubators is that firms start and thrive; business incubators support firms by advising them and by offering them the necessary technical and financial support. This advice and support means that young graduates are more equipped to market breakthrough technology, and local and national economies are bolstered.

Incubation is a method that aids the growth of businesses in their starting stages. It provides entrepreneurs with fostering a favorable atmosphere for growth of their new businesses. Business incubators assist them begin their businesses at a reasonable cost while also enhancing their confidence and ability to succeed.

### **2.1.5.3 Network Services**

When entrepreneurs are made aware of potential entrepreneurial development opportunities, they can better prepare themselves for the challenges of starting and running successful businesses. Connections with significant institutions and organizations in the neighborhood, whether official or informal, serve as a method of facilitating this. The following are the stages involved in this procedure. No doctory collaboration among the communities, business through networking are considered as important element (Hernández-Gantes, 1996). Networking services are based on people; this resource can be vital for a company in a critical situation (Pearce, Grafman, Colledge, & Legg, 2019). To gain access to something, startups

need access to online resources (Abbas, Raza, Nurunnabi, Minai, & Bano, 2019). Mort and Weerawardena (2006) are accountable for defining the company's mission and goals. Connections with external allies are also essential sources of knowledge; therefore, the ability to build and sustain relationships with external allies is important (Mort & Weerawardena, 2006). Companies must first learn what their consumers want and need before they can develop viable items for them. They concluded that the performance was satisfactory. Their network abilities had a big effect on the amount of institute affiliates. (Torkkeli, Kuivalainen, Saarenketo, & Puumalainen, 2019) found that knowledge-intensive products can be developed with the help of networking capabilities that allow companies to globally identify potential competitors and performance opportunities. New companies need access to the marketplace as well as ties to certain sectors in order to be successful. Business networking services entail a network of contacts formed through collaboration with a number of mediators or organizations that provide VC (Pettersen, Aarstad, Høvig, & Tobiassen, 2015). According to the findings of (Njau, Wachira, & Mwenda, 2019; Pettersen et al., 2015), networking services have a beneficial influence on venture formation. (Alpenidze, Pauceanu, & Sanyal, 2019) As previously mentioned, entrepreneurial growth has a dynamic, positive relationship with the availability of funds, the internal capabilities of businesses, and the availability of powerful networking services. As indicated by Pettersen et al. (2015), business incubators offer necessary networking services but only to a limited extent non-generic networking services. Entrepreneurship incubators provide a wide range of network services to businesses, including providing them with critical expertise and with links to VC firms, venture capitalists, guidance counselors, and strategic partners, as well as assisting them in raising bank financing, grants, and VC, among other things (Njau et al., 2019).

#### **2.1.5.4 Technological Support**

Collaboration between universities and businesses is an important component of effective national innovation systems. The experiences of industrialized countries may be utilized to learn from and benefit from a variety of different types of university–industry collaborations and partnerships. High-intensity university–industry collaboration is shown through research alliances and shared equipment for the development and commercialization of ideas developed by academic inventors via a company in which they have a minority equity position, among other things. The Punjab Information Technology Board (PITB) is in charge of the TechHub Connect program, which is taking place in Pakistan. We are Pakistan's first and only freelancers

co-working place, having opened our doors in 2011. Our role as an interface between industry, academia, and government allows us to assist in the establishment of mutually advantageous collaborations and partnerships not just within, but also among, these three sectors. Plan9 Tech Incubators Connect is an online community that allows well-known IT organizations to market themselves as employers. Students can learn about current market trends and hone their skills to meet current and future industry demands. Professors can use Connect to improve their profiles and adapt to industries' research needs. Some technology-intensive enterprises, according to research, benefit significantly from business incubator services, which are crucial to the growth and marketing of such businesses. Aware of the fact that such companies need improve if they want to work for long term they need experience, capital etc. and understanding procedures in addition to physical infrastructure, as a means of assisting them in achieving long-term success (Jamil, Ismail, Mahmood, et al., 2015; Wonglimpiyarat, 2014a)

### **2.1.5.5 Training Programs**

Some technology-intensive enterprises rely on business incubators for their development and support. Training programs are considered as entail or it is easily to say it is the back bone to enhance the skills. Therefore, BIC play critical role and have the long run impact on the knowledge of the individuals (Jamil, Ismail, & Mahmood, 2015). It is impossible to overestimate the significance of training and mentoring services in the operations of business incubators and the success of their clients (Alpenidze et al., 2019). These services are viewed as essential for continuous improvement, skill development, and, ultimately, for excellence in teaching and learning. Universities offer entrepreneurial education for future societies. Entrepreneurship thrives in ecosystems in which a variety of competitors play vital roles, involving international, national, municipal, and local governments, as well as people, NGOs, and business executives, as well as entrepreneurship academic institutions and businesses. Academic institutions are vital to develop young people's perspectives, abilities, and behavior. However, organizations outside academia have an important role in creating official and informal educational initiatives, as well as in reaching out to underserved and disadvantaged sections in society. In this environment, collaboration and multistakeholder alliances are vital (Gianiodis & Meek, 2020).

Yusubova, Andries, and Clarysse (2019) examined the performance of business incubators, they found that business incubators provide customers with supporting infrastructure, such as

training, mentorship, and access to financing. They reported that the finest thing about the fact that business incubators offer services that are tailored to the specific requirements of each company owner. Consulting services, according to Hernández-Gantes (1996), are ranked third, for the improvement in the business training and development through education, how difficult it is to run a company, and the value, thus there is a growing need for education, training, and consultation.

Kuryan, Khan, and Gustafsson (2018) stated that fostering the development of a creative company culture is another important goal. According to them, managerial support and services are often connected with management and mentoring programs. Therefore, business incubator centers are playing important role in the startup because every startup's need knowledge, skill and provide the wide solution for these issues related to business. In this regard, training programs are designed to by the incubated businesses for the solution of the problem..and development in the business (Armellini, Dega, Garcia, & Machado, 2019; Myint, Vyakarnam, & Huener, 2019). It has been stated that training programmes and communications services are important contributors to the development of technology entrepreneurial ventures in Germany, whereas government help and operational decisions are the main considerations that determine the success of business incubators in the United States (Armellini, Dega, Gracia, & Machodo, 2019).

### **2.1.6 Entrepreneurial Finance**

In the topic of entrepreneurial finance, two major disciplines are brought together: entrepreneurship and finance, which are both important. Finance is required when individuals has plan for the startups (Paré et al., 2009). Entrepreneurial finance is becoming a globally recognized issue that academics are pursuing to make a career. It has been hailed as a breakthrough that aids budding entrepreneurs by creating templates for a variety of small startups. In this century, when there are more competitors in a wide range of industries, startups are being challenged by large businesses. As a result, encouragement from important stakeholders in the sphere of entrepreneurship development was required. One of the most significant considerations that young entrepreneurs or new startups must make when starting a firm is how many resources to finance. Because old and new startups are somewhat different, it is critical to assist young enterprises in overcoming their fears by recognizing their financial benefits (D. Cumming & Johan, 2017). Entrepreneurial finance is responsible for making

financial decisions for new businesses or startups. The reason for this is that new businesses must be taught how to acquire finances and manage funds and other business resources. A diversion from entrepreneurial finance has caused numerous businesses to fail. Younger initiatives must be taught that some expenditure channels are unnecessary if the business is to thrive (Cosh, Cumming, & Hughes, 2009). Entrepreneurial finance, according to (Setyawati, Purnomo, Irawan, Tamyiz, & Sutiksno, 2018); entrepreneurship VC is the use of financial tools and ideas in the planning, financing, and appraisal of entrepreneurship and innovation VC activities, with a particular emphasis on financial administration throughout the entrepreneurial growth process. Operators of entrepreneurial finance, on the other hand, make their money by preparing feasibility reports that show projected incomes and expenditures, including all the costs of starting a new business, such as sunk costs or irrecoverable costs found within the cost of acquiring sites: locations, offices, land, agency fees, insurance policies, and consulting fees. These factors are associated with the RBV as the term resource is defined in both a limited and broad way (Dierickx & Cool, 1989). Penrose(2009) also contributed in the theory by adding the tangible resources such as plant, buildings, and finances and intangible such as human, organizational, and social capital (J. S. Coleman, 1988). Therefore, in the startup all the resource are required so, business incubator center are facilitating the same entrepreneurial advisor. Entrepreneurial finance thus be characterized as the study of resource allocation and values applied to new company enterprises. Entrepreneurial finance focuses on how much initial money should be raised, when and from what sources, the value of a business venture or startup, and the types of decisions that should be made during the business's beginning and exit phases (D. Cumming & Johan, 2017). In truth, this is a relatively broad discipline, spanning public policy, psychology, sociology, and geography, to name a few (D. Cumming & Johan, 2017). Entrepreneurial finance research as any research involving financial difficulties among entrepreneurs and organizations with an entrepreneurial development.

According to Scott (2020), to discover opportunities, start commercial endeavors, and create value, new enterprises require financial resources. Entrepreneurial finance, on the other hand, is directed by a set of operating principles, which include: (a) owners must hire real, intellectual, and financial capital; (b) expected rate of return and risk are inextricably linked; (c) cash is the currency, whereas accountancy is the business language; (d) fresh venture financing implies looking for new investors, negotiating, and maintaining confidentiality; (e) the financial goal of a venture is to increase value; (f) assuming people behave against their

self-interests is risky; and (g) character and reputation can be assets or liabilities for a business (Scott, 2020).

### 2.1.7 Business Startup

Every firm is a startup in its early stages, but after 3 to 5 years startup businesses progress to small-scale businesses. Proprietors analyze their location as well as their target markets. The founders of a startup are the ones who fund it. It's usually an internet firm that can reach out to clients quickly. The expense of launching a new business is typically thought to be lower. Because their target clients are few, startups use reliable techniques to reach their target clients. Startups can improve their advertising by incorporating more technology. A small-size firm, on the other hand, could be a corporation or a company with lower skills (Brown, Mawson, Rowe, & Mason, 2018).

**Figure 1: Financial problems faced by startups**



Economic deficiencies stem from management's operational areas, causing organizational, sales, marketing, and financial issues. Financial issues are regarded as the most serious because of their significant impact on the remaining operating areas. Any economic activity relies on a reliable supply of financial resources (Kessler et al., 1990). Various empirical research studies demonstrated that financial obstacles, as well as management and know-how hurdles, are the most significant challenges faced by new businesses (Dowling, 2002; Sheuner et al., 1996; Subrahmanian et al., 2000). Figure 1 depicts the specific financial constraints that startup companies face. Below is a brief explanation of each point.

### **2.1.7.1 Equity Capital and Self-financing**

According to a recent survey in 2021 of 286 new business founders conducted by IHK Würzburg-Schweinfurt, among the most serious major obstacles to the establishment of new businesses are challenges resulting from a lack of privately owned money and unfavorable earning opportunities (Roski, 2012). As a consequence, one of the most important success factors is the property status of the individual who is starting the company and/or the team that is starting the firm. Persons who are starting a business in times of crisis and companies with a low equity capitalization are frequently unable to survive. Furthermore, a tiny equity basis can make it difficult to make critical investments.

### **2.1.7.2 Credit Financing**

The German Asian Development Bank found that equity capitalization, insufficient or limited earnings power, and inadequate securities strategies were the most common reasons for credit institutions in 2005, according to their survey (Frondel et al., 2011). Regardless of the industry, startups pose a high risk in terms of financing considerations, particularly the risk of default in the event of insolvency (Dieterle, 1990). Earnings power of startup enterprises:

In the early phases of development, small service enterprises do not belong to the huge surplus-generating, high-earning economic groupings (Günterberg & Kayser, 2004). Small businesses, in comparison to larger units, rarely participate in cost structure improvements based on economies of scale, which is one reason for their poor earning capacity. These small businesses are frequently characterized by a lack of resources. Profits carried over from the preceding year, misjudged earning power, and an inability to achieve the basic entrepreneurial program (BEP) are all reasons for a company's failure to reach its financial objectives. A variety of obstacles confront newly formed firms, especially startups, during this period. Typically, they operate in markets that are very competitive (Lindgren, Tällekint, & Polfeldt, 2000).

### **2.1.7.3 The Size of Startup Enterprises**

Because of their small size, startup enterprises may experience difficulty in obtaining finance. Most startup enterprises are much too small to be able to seek competitive capital to finance their operating assets, including both current and non-current assets. If their capital requirement is below a specified level, it limits investors from contributing cash since their profit possibilities are not sufficiently attractive to warrant their participation (Mirhosseini, Tan, Hamid, & Yusof, 2008).

#### **2.1.7.4 Information Asymmetry and Uncertainty**

In the exploitation of entrepreneurial opportunities, uncertainty and information asymmetry are two critical variables that impact the resource acquisition process, independent of the kind, source, or quantity of finance used (Blau & Scott, 2003). Generates "four impediments to capital acquisition": (1) non-disclosure challenges, (2) opportunism, (3) unnecessary risk enchanting, and (4) adverse selection. Blau and Scott (2003) identified "three impediments to capital acquisition" when it comes to uncertainty: (1) the inability on the way to evaluate, (2) bargaining challenges, and (3) the necessity for collateral. These issues combine businesses to gain marketplace credibility and trust, which would allow them to gain easier access to capital funding opportunities. This frequently leads to a slower rate of expansion than would otherwise be the case.

#### **2.1.7.5 Startup's Financial Services**

Handmade craft, retail, and other local services are vastly used as business activities. Small firms and startups, due to their limited skills and lacking of scale profitability, can provide the needed adaptability as well as business outcomes that they are unable to provide in the conventional manufacturing sector. The hospitality sector, in particular, is more reliant on current assets than on non-current assets, and it employs a bigger percentage of people than any other sector of business. On the one hand, this specification is problematic from a financial standpoint in that the required amount of capital does seem to be lower than the amount of capital required in manufacturing; on the other hand, the considered necessary capital requirement is higher than the amount of capital required in the producing industry. Financial resources invested in current assets, such as those used to finance receivables and wages, on the other hand, generally, New businesses in their infancy often have a tough time securing financial backing due to their relatively modest sizes. The vast majority of new businesses are simply too tiny to be able to search for other sources of funding to finance their operational assets, which may include both current and non-current assets (Ktick, 1990).

#### **2.1.7.6 Financial Management Competences**

In addition to lacking the essential startup funds, most company founders also lack the requisite management and business abilities. The majority of entrepreneurs are quite young; it is not uncommon for them to establish a business just after graduation (Fischer, 2004). According to a study of possible startup investors conducted by Krauss et al. (2019), one of the most significant entrepreneurial deficiencies is a lack of financial management skills. In general, small businesses

are subject to a variety of funding limitations. As a result, effective methods to improve small unit financial management are required to enable financing (Fischer, 2004).

The field of entrepreneurship study offers a wealth of information about the cause and effects of business startups, such as why and when academics choose to become enterprises, or academia (Goel, Göktepe-Hultén, & Ram, 2015; Guerrero, et. al., 2014), and how the environment around a research facility affects the formation of business startups (McAdam & McAdam, 2008). Furthermore, several research studies looked at specific resources that influence the survival or development of academic startups in terms of entrepreneurial development (Klofsten et. al., 2014).

Disputed the fact, this study concerned to provide the empirical and theoretical investigation of business startup's and the role of business incubator who's provide the facilities to develop the ideas Because business startups are widely found in the high-tech industry, they can be regarded a subclass of New Technology Based Firms NTBFs, hence a precise description is required. Both firm forms, however, are distinct. Business IC provide the opportunities for the individuals to accurate their business and find new opportunities to promote them in positive sence and bring innovations for the improvement (Agarwal & Shah, 2014 Colombo & Murtinu, 2017; Lockett, Wright, & Franklin, 2003). Businesses are often started by researchers who are primarily science-oriented, while NTBFs are frequently who do not have a background in research or science-related fields. A third condition that is frequently described is that the innovation generated frequently follows a problem-solving research methodology, but it is not ready for commercial production or meeting client demand at the time the Regional Business Service Organization (RBSO) is established (Clarysse, Wright, Lockett, Van de Velde, & Vohora, 2005; Colombo & Murtinu, 2017)

### **2.1.8 EO**

Entrepreneurship has had a period of expansion as an area of study in the recent past. No longer restricted to the new venture creation process, entrepreneurship research has expanded to areas such as corporate and social entrepreneurship, (Covin & Slevin, 1991; Covin, Slevin, & Covin, 1990) and how, by whom, and the extent to which opportunities are discovered, evaluated, and exploited (Venkataraman, Katz, & Brockhaus, 1997). As such, entrepreneurship has gone beyond being a label for an individual who has started a business; our understanding of entrepreneurs has evolved to include individuals who act entrepreneurially in a variety of

contexts. Arguably, the most common conceptualization of what it means to act entrepreneurially has been the EO construct, which has been the subject of much empirical and theoretical work (Covin, Green, & Slevin, 2006). Through an understanding of the behavior of business incubators, EO attempts to capture the extent to which an incubator's posture is entrepreneurial by assuming that the higher the EO of the top manager(s) of the firm, the more likely it is that the firm's overall posture would be entrepreneurial. The study of EO has become an area of entrepreneurship research that is developing an accumulative body of work (Andreas-Rauch, Johan-Wiklund, George-Tom-Lumpkin, & Michael-Frese, 2009) that includes over 200 peer-reviewed studies (George & Marino, 2011),

EO's origins have been attributed to the work of authors such as Mintzberg (1973) and Khandwalla (1977) who, in their analysis of the strategy making process, attempted to describe the variables involved in decision making and found that entrepreneurial incubation centers tended to take more risks. Miller (1983), drawing on the variables that were believed to best reflect the core components of entrepreneurial strategy, identified three of the variables he believed to best represent the process of entrepreneurship itself. Entrepreneurial firms are those who participate in product-market innovation, move into potentially dangerous territory, and are first to introduce "proactive" innovations, so beating rivals to market. A non-entrepreneurial business is one that pushes the envelope very little, is excessively averse to risk, and imitates the movements of rivals rather than forging forward on its own initiative. Entrepreneurship may be thought of as a composite weighing of these three elements, at least in theory." As such, Miller (1983) isolated three individual characteristics of an entrepreneurial firm, which, in its decision making, is guided by innovation, risk-taking, and pro-activeness. Miller (1983) contrasted this behavior with the non-entrepreneurial firm, which is presumed to engage in limited innovation, shy away from risk and not be very proactive in decision making. Furthermore, Miller argued that it is not the individual strength of each characteristic that makes a firm entrepreneurial, but rather a combination of all three.

Crafts manufactured by hand, radials, and several other locally provided services are very popular choices for commercial endeavors. Small businesses and startups may have the adaptability that the traditional manufacturing sector can sometimes lack. This is due to the limited skills and lack of scale profitability that small businesses and startups possess. In particular, the hotel industry is more dependent on its current assets than it is on its non-current assets, and it employs a larger number of people than any other industry. This specification is

problematic from a financial standpoint because the required amount of capital appears to be less than the amount of capital that is required in a manufacturing company or organization. On the other hand, the amount of capital that is considered necessary for the growth of the industry. Moreover, investment considered as important resource to generate the assets, such as those used to finance receivables and salaries, provide a higher return than those resources that are invested in non-current assets. In most cases, they provide a lower level of primary collateral security, and aside from that, they almost never offer any kind of artificial liquidity. The result of this is that obtaining funding for current resources, which is essential for new businesses and small businesses just starting out, has become ever more difficult.

To understand entrepreneurship within organizations, the current entrepreneurship literature has employed the notion of EO, which is defined as "the strategies, procedures, and decision-making styles managers use to act entrepreneurially" (Lumpkin & Dess, 1996). On the other hand, Covin, Green, and Slevin (2006) defined EO as a growth orientation and the primary strategy for sustaining growth (Eshima & Anderson, 2017). However, empirical examination of the EO–firm growth association has yielded inconsistent findings (Moreno & Casillas, 2008; Anderson & Eshima, 2013). In this situation, academics have previously used a simple linear regression on certain modifiers in order to determine if the contradictory findings are due to variations in internal organizational processes or variances in external environmental variables (Wiklund & Shepherd, 2005).

Lumpkin and Dess (1996) emphasized the contrast between the ideas of entrepreneurship and EO, noting that some of it is used to define entrepreneurship processes, while the former relates to entrepreneurial content. While a large amount of study has been done into the link between EO and company success, there is still more work to be done (Rauch et al., 2009); our understanding of how entrepreneurial processes unfold inside firms and how these processes lead to firm growth is still limited. There is no methodology or EO model available at the present time. The purpose of this study is to contribute to our understanding of entrepreneurial development and how incubator center helps in the startup's. furthermore, BIC processes within organizations by examining how these entrepreneurial processes unfold within organizations and by conducting an investigation into how these entrepreneurship and innovation processes lead to growth trajectories, as described by the Penrose hypothesis of firm growth process.

There is an abundance of research looking at EO's contribution to company development as well as studies utilizing the Penrose theory of business growth process. While business growth research is widely considered to be less rewarding as a consequence of theoretical stagnation (Nason & Wiklund, 2015), as well as empirical work indicating that firm growth rate is unpredictable, the field has been criticized for its lack of innovation (Nason & Wiklund, 2015). In 2010, McCelvie and Wiklund published an article on the topic. They made use of a static research design to analyze dynamic occurrences and a variance research design to study process theories, which created a problem with their findings. Evidence from previous studies has shown that neither the entrepreneurial nor the company development processes follow a linear path. Modern entrepreneurship research has identified corporate entrepreneurship as a general non-linear complicated by repeated patterns and variables, which is in accordance with Penrose's idea of business evolution via a feedback loop. In order to investigate the situation's complexity and the repercussions of these interwoven processes, it is necessary to establish a new strategy. It is the goal of modern entrepreneurship research to close this research gap by using a virtual computer approach.

Furthermore, in the EO literature there has been a great deal of discussion concerning the complexity of EO and its applications. One-dimensional approaches to EO tend to focus on it as a whole, neglecting the numerous configurations of its three dimensions (see appendix, questionnaire) that might exist simultaneously (Covin & Slevin, 1989). A multidimensional approach to enterprise optimization examines the individual impacts of three enterprise optimization factors on business development, while disregarding the overall influence of all three dimensions (Lumpkin & Dess, 1996). It is important to note that the combined impact of the distinct EO dimensions may not be the same as the total of the effects of the three dimensions when considered individually. There is no doubt that there might be statistically significant interaction among the three dimensions, regardless of whether the three dimensions are seen from a unidimensional or multidimensional viewpoint. However, it is not known whether or not these associations exist, how they might influence firm development outcomes, or what the underlying processes are that are responsible for them.

The interaction effects between the three dimensions of EO can be used to determine whether or not there is an ideal dimensional arrangement of EO for firm development. Aspects of the entrepreneurial process that are unavoidably fraught with danger are molded by a variety of unpredictable circumstances. Alternatively, the idea that the entrepreneurial process does not

unfold in a consistent fashion opens the door to a design science of entrepreneurship. On the one hand, this could indicate that the entrepreneurial process is highly unpredictable; on the other hand, this could indicate that the entrepreneurial process is controllable (Dimov, 2016).

### **2.1.9 Social Capital**

Among all the resources social capital is named as influencer which helps to characterize the individual's biography. Mostly of the studies considered as long run impact on with more or less institutional ties of international agreement and acquaintanceship (Bourdieu & Wacquant, 1992). There have been disagreements among economists for decades about to Baker (1990), is a system of social networks. R. Putnam (1993) stated that not only the structure of partnerships is important, but also the behaviors of those relationships. Resources that can be accessible through networks, whether they are real or potential, and is the important resource category (Mustar et al., 2006). As far as social capital is concerned Nahapiet & Ghoshal (1998) distinguish social capital from human capital (Hayter, 2016).

Adler and Kwon (2002) claimed that a collectivity's social capital "lies in its internal structure - in the links between people or groups and collectivity, especially, in particular, in those qualities that provide the collectivity cohesion and so make the pursuit of goals easier "Community objectives."

*The total amount of real and potential resources imbedded inside, as well as their availability through, and derived from, an individual's or group's network of links a social group As a result, social capital includes both the network and the assets that can be acquired mobilized as a result of that network. (Nahapiet & Ghoshal, 1998)*

To put it another way, social capital is a valued asset based on interpersonal and organizational ties societies or communities "Resources inherent in a social system" is how social capital is defined structures that can be accessed and/or mobilized for certain purposes" (Lin, 2002). The term "social capital" first originated in community research involving social networks. Over time, solid personal ties are built to give trust, cooperation, and support in community-based collective action (Jacobs, 2016). Human and social both are considered as important element and has strong correlation (J. S. Coleman, 1988); (Loury, 1987) for example, company performance (Baker, 1990), geographic regions (R. Putnam, 1993, 1995), and nations (Fukuyama, 1995b). "A firm should be considered as a social entity," (Kogut & Zander, 1996)

proposed a community dedicated to the generation and transfer of data with the utmost speed and efficiency knowledge.” According to (R. Putnam, 1995), social capital is not a one-dimensional term, it has a variety of aspects that should be investigated in order to fully comprehend social capital. The most important networks of interactions contain a useful resource; a resource for the conduct of social affairs that provides members with a certificate that qualifies them to certain benefits to give them credit (Bourdieu & Richardson, 1986; Nahapiet & Ghoshal, 1998). Some resources may be unavailable which their networks offer them with connections, which they can use. The character of social ties within a community is reflected in social capital members' levels of collective goal orientation and common vision for the organization rely on” (Leana and Van Buren, 1999). By definition, social capital is linked to values, vision, purpose, and trust are all critical components of members of the business’s incubators. Social group businesses' capital is tightly enmeshed in the business community and it is extremely difficult for competitors to imitate the capital (Dess and Shaw, 2001). Incubation centers’ socialization is influenced by incubation centers’ history. Capital resources as a result, studying social capital theory is considered as an important element which is supported extremely important in today's world in the context of incubation centers. According to Nahapiet and Ghoshal (1998), the factors that lead to the establishment of time (stability), dependency, interaction, and social capital are the four components of social capital in businesses and finalization (Arregle et al., 2007; Nahapiet & Ghoshal, 1998; Pearson et al., 2008). These four parts, according to Arregle et al. (2007) and Pearson et al. (2008), are what when incubation centers succeed, they have the ability to create very valued and more valuable assets. Compared to non-incubation centers, incubation centers have more effective social capital. Incubation centers are extremely stable. They are interconnected and have a lot of interactions and among the variables. these conclusions are based on this argument. In this part, four things are briefly discussed to underline the necessity of studying in incubation centers, there is a lot of social capital. “Because trust takes years to develop, relationship stability and longevity are essential. Network characteristics linked to high levels of trust and cooperative norms” (Nahapiet & Ghoshal, 1998). Investing in social ties is necessary for building social capital, it also needs time to develop and expand (Bourdieu, 2011). In incubation centers, members have a long-term bond that helps them incorporate social capital into these businesses. The history of an incubation center and its enterprises accumulates over time; long-term relationships between members aid economic decision making in the company. The vision and norms in incubation centers are gradually shaped by the values of the investors. As a result, the company's vision is closely aligned with its mission personal values, which have emerged

as a result of intense interaction among an incubation center's members (Lansberg, 1999). Social capital is a type of capital that builds up through time and represents people's values. History's investment in social relations and organization (Bourdieu, 1986; Granovetter, 1992). The stability of the social system is required for all forms of social capital. Time is a crucial aspect in the growth of all things because it is constantly active. Social capital's several dimensions Coleman emphasizes the significance of time and consistency in his work. Misztal (1996) emphasized the importance of social stability in social connections relationships based on mutual duties that are clear. Furthermore, a commitment to stability makes things easier. Additional processes that are required for the growth of social capital: interactions, interdependence and closure are two concepts that come to mind when thinking about interdependence (Nahapiet & Ghoshal, 1998). When it comes to an incubation center, the Almost always, the major goal is to maintain the family's stability inside the company. It requires a lot of effort. Long time is required for incubation centers to transform, and this demonstrates that incubation centers have a more stable ownership structure (Arregle et al., 2007). The conditions in incubation facilities are quite consistent. They are interrelated and have a great deal of mutual influence and interaction with the other factors. These inferences may be drawn from this line of reasoning. At this section, four points are touched on briefly to emphasise the importance of learning in incubation centres, where there is a significant amount of social capital.

The quantity, quality, and strength of relationships between people is referred to as interaction between a group's members (Pearson et al., 2008). Interaction was introduced as a concept by Bourdieu (1986). Interaction contributes to the formation of social capital in an organization and is a vital component for its success. The preservation of social capital when there are a lot of people around, interaction is more intense the individuals' social ties and affiliations. The emergence of interaction aids in the formation and strengthening of social bonds; however, interactions must be maintained for the social relationships to survive (Nahapiet et al.), Ghoshal Social capital is different from other types of capital in that the more you use it, the more it grows the worse it becomes. As a result, interaction is necessary for having a dense social capital component (Bourdieu, 1986). The cognitive and relational components of social life, in particular when the ties between people are strong and mutual, capital rises. Boland and his colleagues claim that According to Tenkasi (1995), created and maintain communities of knowledge through action. Both our language and our knowledge need to be remade. In contrast, interaction is required for success. To promote and facilitate the production of social

capital, a shared language is needed. In incubation centers if the objective of the business is more than just to make money, In order to function, Social framework, interaction, and interpersonal ties are increasingly important to members. In the company, members of incubation centers are constantly engaging, and they have links that go beyond the business, after their job hours, resulting in more engagement and social growth. “Actors can get to know one another through frequent and close social interactions,” says the author share critical information and develop a shared perspective” (Tsai & Ghoshal, 1998). A persistent social network comprising almost institutional relationships of bilateral agreements and acquaintance can be characterized as the sum of an individual's or a group's resources, whether physical or virtual (Bourdieu & Wacquant, 1992), that has been used in this study.

### **2.1.10 Entrepreneurial Development**

The notion of entrepreneurship development was first introduced in 2006, and it was first given in the OECD Entrepreneurship Indicators Program as a tool for EU static policymaking (Europea, 2012). In OECD Statistic Working Papers (reports), entrepreneurial development is defined as a relevant and measurable factor using two approaches: "top-down" and "bottom-up" (Ahmad, 2008). Other definitions are vague and only cover a portion of the entrepreneurship function.

Creating and growing economic activity inside a new or existing organization by merging risk-taking, creativity, and/or innovation with good management is defined as "Entrepreneurship aim" and "Entrepreneurial process"(Europea, 2012).

In the context of new business development, entrepreneurial development is a system of variables of entrepreneurial activity that can be defined by six indicators and is crucial for the creation of new firms (Ahmad, 2008) and the introduction of new innovations (Kruger, 2005). Later concepts assist in introducing the current supply function as a foundation for entrepreneurship development through social capital formation (Jennings, 1994). Nowadays, social activity-based businesses are discovering niches through which to grow. Enterprise development is an important first step in the development of any substantial corporation. As a result, debates about entrepreneurship development focus on entrepreneurial activities and human characteristics. Opportunities for corporate growth emerge from a top-down perspective ("top-down" method) and effective resource exploitation ("bottom-up" strategy). Kruger (2005) offered a structured list of factors of entrepreneurial development that are solely

dependent on entrepreneurial activities. Furthermore, , corporate entrepreneurship improves strategic management construction, which in turn is synchronized with entrepreneurial behavior and applied to entrepreneurship as a consequence of its existence. According to the notion of entrepreneurial growth, entrepreneurial activity and financial resources are kept separate from one another (Gartner, 1988; Kruger, 2005). N. Ahmad (2008) grouped entrepreneurial activity and development by specific indicators and impacts in order to provide a guide of quantitative dimensions, and found major discrepancies between the "bottom-up" and "top-down" approaches.

An entrepreneurial mentality is one that is concerned with discovering, creating, and acting on possibilities that are beneficial to both the entrepreneurs and the shareholders in a business (Finlay-Robinson, 2013). The notion of innovation is also associated with the concept of creativity, motivation and vision, all of which are important in guiding businesses through the many phases of their growth (David et al., 2012). Entrepreneurship has generally been linked with small businesses that were able to smash into a market with something like a good or services that resulted in significant transformations in the manufacturing sector (Stagno et al., 1977). Today, entrepreneurship is acknowledged as a critical component of huge organizations, and numerous studies have been undertaken to define entrepreneurship as a planned action distinct from an individual (Barringer & Bluedorn, 1999). (Roxas, Lindsay, Ashill, & Victorio, 2008) employed three variables to define the amount of entrepreneurship in a business: inventiveness, pro-activeness, and the degree to which risk was taken. Entrepreneurship, according to (Mishra & Zachary, 2015), is "a process of value generation and appropriation directed by businesspeople in an uncertain environment. Shane & Venkataraman (2000) described it as "finding, evaluation, and exploitation of opportunities."

People become company owners when they think it is the greatest choice among several alternatives. This typically occurs after a significant life-changing event, such as a loss of employment, mental breakdown, risk opportunity, or financial gain, which encourages them to consider they are on the correct route (Twigg et al., 2012). Businesses are sometimes formed by people who want to own a business but are no't very imaginative or risky. Individuals who are content to manage a small business are known as small business owners. As a result, they are not the same as an entrepreneur who has ambition to innovate.

The focus of entrepreneurship research has shifted from business owners to individuals with distinct qualities (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011). When someone has the

ability to see new possibilities, take a risk, and combine resources in order to develop a successful new product or service, they are considered an entrepreneur by the business community (Beisert et al., 2012; L. Huang & Zhao, 2018). Enterprisers are people who are capable of seeing opportunities, allocating resources, and taking action which thus adds value to a market. However, while some individuals use the terms entrepreneur and founder indiscriminately, a founder is someone who develops and manages a business, regardless of whether they identify as entrepreneurs or not (Qi & Zhang, 2011).

Although these differences may appear minor, they have a significant impact on these people's mental models. Table 3 lists a number of phrases that have been used in the literature to define the various terms for a founder. A founder was characterized in this study as an entrepreneur who created, managed, and owned the company (irec & Monik, 2010). People who wish to run their own company but lack imagination or a willingness to take risks are often the ones who start businesses. People who are willing to take on the responsibilities of running a small company are referred to as small business owners. As a direct consequence of this, they are not the same thing as an entrepreneur who strives to innovate.

## **2.2 Empirical Literature Review**

### **2.2.1 Business Incubators and Entrepreneurial Development**

Business incubators offer the entrepreneur the required networking opportunities and tools for launching and expanding a viable business enterprise. Entrepreneurs are accepted into company incubators for a set period of time until they achieve their target profit or sales income (Fritsch, 2013). If a fostering atmosphere is provided, it is difficult to identify an organization in its early stages that will grow substantially. By investing in management rather than merely ideas, business incubation acts as a venture capitalist.

As a result, financial institutions, industry specialists, and corporate development professionals must all take part in the process. Successful business executives have a robust organizational center of control as well as a strong desire to be successful in their endeavors. They have a higher degree of education and are less risk averse (Li, Ahmed, Khan, et al., 2020). In order to contribute significantly to economic growth, Pakistan must refocus its entrepreneurial efforts toward export-focused startups in order to join the developing economies (Fritsch, 2013). Entrepreneurial activity and economic development have a U-shaped relationship. Entrepreneurship is more prevalent in countries with the highest and lowest GDP per capita.

Mahmood, Jamil, and Yasir (2016) concluded that business incubators are essential factors in promoting entrepreneurial development; they increase employment. The research guided through the result that there is a positive association among the selected variable. Business incubators act as facilitators that provide a path with low cost; so, entrepreneurial activity grows (Ackermann et al., 2020). Globally, there has been significant economic growth in recent years; by taking a close look at the variables that have aided rapid entrepreneurial development, it is obvious that an enabling operating environment exists. According to Paré et al. (2009), a number of factors, including the surrounding environment, direction of monetary policies, government assistance for technology diffusion and market access, and business support services such as business incubation, contribute to the advancement of entrepreneurial development; significant investment in human capital is also a critical factor.

The extent to which an incubator is successful is contingent upon a variety of circumstances, including clear success metrics, entrepreneurial intention command structure, providing comprehensive value to tenants, a rational housing association selection system, and finally assisting tenant firms in gaining access to finance, human resources, and networking and mentorship resources that are otherwise not available to them (Lalkaka, 1997; Wiggins & Gibson, 2003; Malefane, 2013). Enterprise development and business incubators are considered to play a role in the survival of startups; they are gaining appeal throughout the globe as a means of fostering entrepreneurship. Small and medium-sized enterprises (SMEs) in developing nations have a high failure rate, which is estimated to be around 75% within three years. Business incubators are considered the "magical solution" that will reduce this high failure rate to less than 10% within three years (Bowen, Morara, & Mureithi, 2009; Klapper & Richmond, 2009; Longenecker, Moore, Petty, & Palich, 2005). After incubation, the survival percentage of incubated firms is expected to be as high as 70% based on past experience with similar enterprises. Business incubators might have a major influence on job creation, entrepreneurial growth, and poverty reduction by strengthening the survival rate of startup and small firms (Aerts et al., 2007). Training and coaching that promotes the business are made available to incubator tenants. Projects are described as a "favourable environment in which startups, new ventures, and ideas are developed over time, developed, and commercialized, resulting in profitable, financially viable, and scalable enterprises without exposing them toward the harsh realities of the business environment and high startup costs." It is necessary to define the definition with the help of the infrastructure and services portfolio. SMEs' survival is seen as a precursor to company expansion, especially in developing countries. When starting

a new firm, entrepreneurs in both developed and developing nations face significant risks. Small firms in Australia fail at a rate of 23%, however, in Malaysia they fail at a rate of 60% (Ahmed & Seet, 2009). SMEs in South Africa are 75 percent failed to operate because have been the guidance are not in the listed (FinMark Trust, 2006). Several studies, like Njonjo's (2010), have shown that Kenya has a high failure rate in three years, but that the firm has expanded by 60% and that business incubators have overcome these failures. A lengthy history of business incubators may be traced back to New York, when the first supportive notion was conceived. The Batavia Industrial Center (BIC) was created in 1959 and is located in Batavia, Illinois. Lewis (2002) and Meru et al. (2011) describe how the firm has seen fast growth.

An entrepreneur is someone who has the dynamic capacity to function in a creative way in order to earn additional profit for themselves. In order to achieve significant economic benefits and success, the firm must master the capacity to effectively market and distribute its new product. Small business development is the objective of the Entrepreneurship Development Center (EDC), which provides a supportive environment for the growth of small businesses. Academics at Pakistani universities are emphasizing on the formation of Technical Economic Business Incubators, which will collaborate with a group of entrepreneurs and startup companies in the successful implementation of new early-stage commercial ventures (Mumtaz, Shafi, & Zafar, 2017).

Mumtaz (2017) studied the importance of BI by concluding that it help the business start and thrive by advising them and offering the necessary technical and financial support. Young graduates are more equipped to market breakthrough technology, bolstering local and national economies. By promoting networking with stakeholders, well-knit cooperation among entrepreneurs, colleges, and industry has a significant impact on the economy. In Pakistan, the first business incubator was established in 2005 at the, and a slew of other business incubators have thrived in Pakistan throughout the years. "Developing the necessary contacts, industrial know-how, and getting attention is a challenge for young, creative, and inventive businesses. At Plan9, create an atmosphere that is conducive to a startup's development and addresses all of the aforementioned issues." At Plan9 tech incubators (PITB), the trend of entrepreneurship has seen a significant increase in 2016. Many micro-companies were founded from the ground up by student entrepreneurs, as well as mature professionals who began their own IT businesses. The mentorship was supplied by several supporters, as well as financial backing from some investors.

Zeenia Faraz, the director of the British Council's social enterprise program for Pakistan, stated, "social<sup>2</sup> enterprise presents an ideal mechanism to enlist young people in Pakistan in developing their innovative ideas into businesses that deliver social and economic impact, address key development issues and contribute positively to society." Using social entrepreneurship training as a springboard, the British Council, in cooperation with Social Development of Education and the Environment Pakistan has committed to improve the capabilities of university business incubators so that they may more effectively produce ideas for new businesses.. Upon completion of the program, the British Council hopes to have in place at least 50 Pakistani institutions by 2018. Zeenia Faraz also stated that the British Council hopes that in collaboration with universities via the incubation centers over 250 social enterprise startups will be helped, with the assumption that 50 of these will go on to become sustainable and profitable enterprises. Some technology-intensive enterprises, according to research, benefit significantly from business incubator services, which are crucial in the growth and marketing of such businesses. In recognition of the fact that such organizations often lack the necessary skills for long-term survival, the second generation of incubators started to provide experience and understanding services in addition to physical infrastructures (Jamil, Ismail, & Mahmood, 2015b; Wonglimpiyarat, 2014).

The employment of an incubation system to encourage economic growth is justified since it is a highly adaptable instrument that promotes fledgling businesses in a variety of ways. Incubators were born out of a number of small business support efforts. The national government initiated a number of those same programmes with the intention of interacting with small enterprises in a manner that was different from previous attempts (Lalkaka & Bishop, 1996). These included: (a) Agricultural Extension, based on the Morrill Act (1862), Hatch Act (1887), and Smith-Lever Act (1914)—integrating agricultural research, education, and technology transfer; (b) State Technical Services, based on the State Technical Services Act [Public Law 89-182, 1965], to assist states in accelerating the adoption of new scientific and technological advances by industry; and (c) Industrial/Technological Assistance Programs, based on the Stevenso Act [Public Law (Lalkaka & Bishop, 1996).

Business incubators arose in the early 1980s as a result of a decade of preceding small business programs. These projects were identified as: (a) business centers, (b) enterprise agencies, (c)

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<sup>2</sup> <https://www.britishcouncil.org/society/social-enterprise/news-events/news-pakistani-universities-launch-social-enterprise-centres>

managed workshops, (d) industrial estates, and (e) research parks (Lalkaka & Bishop, 1996). An incubator is a business that focuses on fostering the growth of small businesses. Shared office services and business development help are two aspects that set incubators apart from other multi-tenant facilities. Allen and Dougherty (1987) conducted a survey of incubator tenants in Denmark asking them to identify shared services available at their facility. Nine services were listed; the service cited most often by the incubator tenants was photocopying, which was followed by conference room, security, word processing, and receptionist. The researchers also inquired about the services given by the incubator programs in terms of business development. They created and presented a list of 12 different forms of support, and respondents were asked if their facility provided any of them.

Respondents were asked to identify services supplied from a list of six shared office services and 21 business help services in a survey used to prepare a 1998 report on the state of the business incubator industry. According to the findings, a large number of incubators provided a wide range of services. Almost every incubator provided assistance with writing company ideas, and the vast majority also provided networking opportunities and marketing assistance. The majority of them assisted with accounting and financial management. Almost two-thirds provided access to the internet (McKinnon & Hayhow, 1998). While delivering company aid services is an incubator program's most distinctive feature, managers must juggle a variety of demands at the same time, including:

- 1) Obtaining government financing to kick start the concept, implement the operations plan, and cover the first several months of operations.
- 2) Encouraging active community involvement and private industry membership on governing and advisory bodies, as well as their involvement as mentors, suppliers, and customers.
- 3) Organizing tenant support with the help of a small yet knowledgeable management team.
- 4) Implementing the selection and graduation criteria, because the incubator's most important feature is the rapid development of successful tenant firms.
- 5) Ensuring the incubator's long-term financial viability (McKinnon & Hayhow, 1998).

While the notion of incubation appears simple, its implementation varies greatly based on internal and external conditions, policies and procedures, and the sponsors' and other important players' goals and objectives.

In many forms of the incubation concept, general goals occur in one form or another. Commitments include: (a) promoting entrepreneurial activities that create job opportunities in areas affected by traditional employers' declining economic vitality; (b) modernizing the areas' technological bases through the development of advanced technology ventures, such as spin-offs from large enterprises or universities; and (c) supporting the development of sustainable economic futures for targeted groups, such as rural residents, women, and minorities (McKinnon & Hayhow, 1998). Specific programs have specific objectives within the context of these broad goals. Many incubators in the USA have as their major goal the promotion of economic development. Other goals include diversifying the local economy, commercializing research, transferring technology, generating revenue for sponsoring organizations, promoting women and minority-owned enterprises, and promoting women and minority-owned businesses neighborhood redevelopment (McKinnon & Hayhow, 1998).

### **2.2.2 Business Incubator Economic Development Indicators**

Incubators, like other economic policy tools, have a variety of theoretical and practical problems that must be taken into account when evaluating their benefits and impact. Certain benchmarks serve as the foundation for evaluating their efficacy. A program may fall short in terms of conceptual design or implementation. It is feasible to imagine macro-level policies that are implementable due to structural constraints. Similarly, institutional designs may be incorrect, and no amount of skill will be able to correct them (R Lalkaka & Bishop, 1996). According to the (R Lalkaka & Bishop, 1996) defined and summarized six economic variables used as rating criteria. The following are the six indicators:

- Sponsors—Federal and local government sponsors typically fund the initial investment in incubator programs, which includes space, equipment, and the majority of the operational costs. The amount of public investment in initial development costs and operating expenses each year is used to calculate this metric (PBS, 2020). This study's average public investment was projected to be \$230,000.

- Business Incubation—measured by the total number of enterprises that have been fostered. Over 3,000 new enterprises were reported by the 142 incubators that responded to this survey.
- Survival Rate—measured the ratio between have shut down. The percentage of incubated enterprises that survive in this environment. The percentage of people who participated in the study was estimated to be around 80%.
- Job Creation—the number of employments produced by fostered tenants and graduate enterprises is measured. A total of 26,000 individuals were directly employed by incubators, according to the report.
- Cost per Job—Calculated by multiplying the development and operational costs by the number of employments produced. The average incubator in this study employed one employee for a year at an average cost of \$835.
- The following are examples of non-quantifiable benefits: (a) developing technological and organizational skills in business incubation staff and tenants; (b) relationships with different universities and academy research; (c) motivating and developing based on new product in entrepreneurs; (d) improving community college relations; and (e) persuading countries to implement environments that ensure small business enterprises. Non-quantifiable benefits are those that cannot be quantified.

Much has been written about how incubators should and do act, but the question of whether they fulfil their specific performance goals remains unanswered. These aims may differ depending on the nature of individual sponsors; but, from a public policy standpoint, the goal in all cases is to create new jobs and boost the local economy (Lyons, 1990).

### **2.2.2.1 Academic Entrepreneurship**

Public research institutes and universities share their scientific knowledge through technology licensing, research collaborations with industrial partners, and the development of RBSOs (Landry, Amara, & Rherrad, 2006). A popular and essential instrument for universities and research institutions in attaining their "third purpose" has been the establishment and growth of RBSOs in particular (Munari & Toschi, 2015). This term refers to the commitment made by HEI's which have major contribution in this field and changed the traditional thinking and extend beyond their traditional boundaries (Bercovitz, Feldman, Feller, & Burton, 2000; Bray & Lee, 2000), another reason for these institutions' increased efforts to actively (Yang & Wall,

2008) within their walls. For example, the authors believe that research institutions, both public and private, might supplement their income by holding equity in spin-offs they produce, rather than relying solely on public subsidies (Bercovitz et al., 2000; Bray & Lee, 2000).

According to the authors, the establishment of RBSOs may enhance the reputation and legitimacy of research institutions (Bercovitz et al., 2000; Bray & Lee, 2000). The establishment of knowledge spillovers via research-based commercialization organizations (RBSOs), in addition to the advantages to the institutions, is an important instrument for measuring the technological advancement in the private sector (Andries & Czarnitzki, 2014; Festel, Wuermseher, & Cattaneo, 2013). This could result in the alleviation of unemployment through the creation of new jobs and businesses, thereby resulting in SMEs (Colombo & Murtinu, 2017; Criaco, Minola, Migliorini, & Serarols-Tarrés, 2014; Knockaert, Clarysse, & Wright, 2010).

### **2.2.3 Entrepreneurial Finance and Entrepreneurial Development**

“Access to finance” refers to the funds available for investments in business development (Emery & Flora, 2006). It comprises income, wealth, and other factors assets such as investment, credit, and security that are available in the community (Emery & Flora, 2006). Many types of capital, particularly financial capital, are extremely mobile and may be easily transported from one location to another to set up and develop enterprises (Flora et al., 2004). The power to “underwrite the development of businesses” is provided by entrepreneurial finance. Existing wealth held by members of an entrepreneur’s family could be a source financial intermediary who provide access to the community (including entrepreneurs themselves). Loans or grants, as well as programs that provide tax benefits or other financial incentives (Fey, Emery, & Flora, 2008). Entrepreneurial finance, to the extent that it is available, is also indirectly tied to entrepreneurship to fund the expansion of other capitals. One of the issues in rural areas is the lack of financial resources to start entrepreneurship because capital is scarcer in rural areas than in cities (Lichtenstein & Lyons, 1996). Chemmanur and Fulghieri (2014) stated that financial resource become most important assets while an individual want to run it own business, and indirectly effect the entrepreneurial development. A new company concept that is deemed risky and has a high chance of success, according to the NPE Association and National Venture Capital Association, receives money from venture financiers or angel investors (Baptista, Belhout, Giordani, & Quinn, 2015). "An academic field

that educates about mobilizing financial resources, allocation of capital, controlling risks, optimizing financial contractual agreements, as well as producing but instead improving significance in a small company entrepreneurial context," according to the definition provided by the National Institute of Standards and Technology (Klonowski, 2016). According to Wikipedia, it is "a discipline that explores how to fulfill and distribute money for new economic ventures via creative activities" (Wu, Si, & Wu, 2016). The term "alternative finance" refers to "alternative financing that may be utilized by SMEs to develop economic possibilities via the formation of an organization and values," according to Paré and colleagues (2009). Entrepreneurial finance in recent years Thematic mapping is also used to highlight five important study fields: "venture capital," "crowdfunding," "SMEs finance," "entrepreneurship finance," and "initial public offering (IPO)" and financial reporting." attempting to address the issue of a lack of diversity in entrepreneurship finance research on the basis of these findings." (Nguyen, Pham, Ho, Nguyen, & Vuong, 2021). Entrepreneurial finance research as any research involving financial difficulties among entrepreneurs and organizations with an entrepreneurial development.

Entrepreneurs play a critical role in global entrepreneurial development, but their performance and survival rates are hampered by a lack of financial resources (Shahid2022). Despite entrepreneurship's global reach, the literature on entrepreneurial finance is thought to be ideologically homogeneous in the West (Vuong, Nguyen, Pham, Ho, & Nguyen, 2021). Entrepreneurship is a vital economic engine that contributes to long-term entrepreneurial development (Fuentelsaz, González, Maícas, & Montero, 2015). By employing internal R&D operations and harnessing external ideas and resources, new companies create jobs and entrepreneurial development (Beltrán-Martín, Bou-Llugar, Roca-Puig, & Escrig-Tena, 2017). Furthermore, entrepreneurship contributes to poverty eradication in developing nations without affecting the quality of the environment (G. D. Bruton, Ahlstrom, & Si, 2015; Dhahri & Omri, 2018; Vuong et al., 2021). Another of the most important aspects that determines a new company's ability to thrive and compete in its industry, as well as an established company's capacity to expand, is the availability of financial resources (Carpenter & Petersen, 2002; Cosh et al., 2009). For the purpose of keeping their businesses afloat, entrepreneurs may turn to a wide range of financial resources. These include VC and crowd capital, private equity, debt and industrial credit, angel investors, lending, gigging, and loans from family and friends (G. D. Bruton et al., 2015; D. Cumming & Groh, 2018). The area of investment projects is rapidly expanding; nevertheless, the problem of ideological consistency has been solved in order to

assure the continued sustainability of entrepreneurial growth over the long run (Vuong et al., 2021). Entrepreneurial finance is very pro-cyclical, which appears to be especially true for early-stage startups and business development. Some have suggested that more research should be done to identify "possible causes for extraordinarily pro-cyclical early-stage (venture capital) investments," given the scarcity of existing study on the subject (Howell, Lerner, Nanda, & Townsend, 2020). The entrepreneurial finance market is in a state of flux, new market segments and players have emerged, and they are continuing to do so; in many ways, Both the guidelines for playing these games and the procedures for securing financial support have been updated (J. H. Block, Groh, Hornuf, Vanacker, & Vismara, 2020). The rise of social media, as well as technological advances and regulation, had a huge impact on the entrepreneurial finance sector. Roots provided by the theory of economic entrepreneurship, individuals emerging business executives played a crucial role in economic enhancement of society. New players and financial intermediaries have developed, increasing the number of financing options available to entrepreneurs (Block, 2018). Researchers have examined four levels of analysis in entrepreneurial finance: the businessperson or entrepreneurial firm, the organization that provides financial support to entrepreneurs, the organizations that provide cash to these organizations, and the country or region where the entrepreneurship and innovation firms or investors are located (Cumming, Deloof, Manigart, & Wright, 2019). Traditional corporate finance has a sub-class called entrepreneurial finance (Wright Robbie, 1998). Traditionally, corporate finance has focused on large publicly traded companies, whereas entrepreneurial finance has primarily focused on smaller, privately held, businesses. Business enterprise capital, private debt, private equity, business angel finance, trade credit, crowdfunding, grants, sponsorship from incubators or accelerators, and assistance from family and friends, among other sources of money, are also included in entrepreneurship (Cosh et al., 2009). Entrepreneurs financing investors anticipate making money from the capital gain realized on the venture's selective sale or share market flotation, among other things (Cumming, 2008). University professors were not particularly interested in the behavior of the finance profitability and financial institutions in transferring entrepreneurs to startup businesses or small emerging corporations until the early 1990s, and even then only to a limited extent. The term "entrepreneurial finance" was then introduced. Since then, academics have given the term "entrepreneurial finance" numerous definitions: "It is fulfilling external financing sources to support a company in the startup stage," according to (Denis, 2004). According to Mitter and Kraus (2011), alternative funding can be leveraged by MSMEs to create commercial prospects by establishing an organization and values. Fund, business, and fund provider are all terms that

can be used interchangeably. According to Koch, Kuhn, Gruenhagen, and Hisrich (2010), an alternative description is a finance scenario. SMEs may utilize informal money from investors as a supplementary funding source for their startups and expansions, according to Markova and Petkovska-Mirčevska (2010). This course will cover a variety of subjects, including how to properly distribute funding mechanisms to build innovative business models, when and how much capital should be collected, how to enhance the likelihood of successfully gaining access to financing, and how to make sound financial decisions. New businesses' formation and growth are influenced by a variety of circumstances; access to finance is critical to their survival (Binks & Ennew, 1996; Ebben & Johnson, 2006). Despite the fact that empire-building finance comes in an assortment of ways, obtaining cash is one of the most difficult jobs an entrepreneur faces when starting a new business (Carter, et. al., 2006; Neeley et. al., 2010). Research in the field of entrepreneurial finance focuses on the financial needs that must be met by all entrepreneurial companies that are not made available to the public and have development aspirations in general. As a result, entrepreneurial finance study is not limited to the issues associated with new venture funding, but rather encompasses a much larger variety of subjects (Puche, Braun, & Achleitner, 2015). This has resulted in studies on entrepreneurial financing taking into account a wide landscape of commercial organizations, each of which has set of funding choices. (Achleitner, Braun, Lutz, & Reiner, 2014) proposed evaluating the idea of entrepreneurial finance along two dimensions in order to categorize the wide range of stakeholders and business resources that are now available. The first dimension relates to the stage of a company's entire life cycle that it is currently in at the time of measurement. The component is concerned with both the numerous parties that are engaged in the situation. These two perspectives allow for the fulfillment of the varied criteria of the involved parties while also taking into consideration the unique financial circumstances in which the enterprising entity finds itself. Investigation on corporate financing is associated with and solves the key issues faced by the different players along these two areas, as described by Achleitner and Braun (2014).

### **2.2.3.1 Capital Resources**

Within the first feature, each life cycle has its own set of financial requirements as well as capital sources (Rossi, 2014). The nature of entrepreneurial finance is marked by a strong pro-cyclical trend, which seems to be more prevalent in the early stages of company development and beginning companies. Given the paucity of previously conducted research on the topic,

there have been those who have advocated for more investigation to be carried out in order to determine "potential explanations for exceptionally pro-cyclical earlier and earlier (venture capital) investments." (Achleitner et al., 2014). The embryonic stage is pigeonholed through innovative initiatives that have little or no prior history of operation as a consequence of this. Aside from that, their value proposition is still in the early phases of development (Grichnik, Brettel, Koropp, & Mauer, 2017). Furthermore, market research is frequently completed following the identification of an opportunity so that market entry may begin. This comprises initial public offerings (IPOs) as well as financing approaches used by preexisting startups to acquire back shares from capitalists in order to achieve individuality via the use of specialised resources (collateralized) sources and uses of cash (Achleitner et al., 2014). The another measurement considers the viewpoints of various stakeholders, including the entrepreneur, investor, and asset manager. When considering an entrepreneur's perspective, the primary question, regardless of the firm's life cycle, is how to obtain the appropriate sponsoring to support the (further) growth of the new endeavor. In this aspect, most entrepreneurs rely on personal resources in addition to money resources (Kotha & George, 2012).

### **2.2.3.2 External Debt and Equity**

If funds generated internally are unavailable or insufficient, foreign debt or equity capital may be used as a resource of entrepreneurial capital (Berger & Udell, 1998). Due to the risks of failure and lack of track history of the first. The absence of collateral means that typical bank debt funding is rare for new businesses, especially in the seed and startup periods (Jeng & Wells, 2000; Knockaert, et. al., 2010). According to Giessner, Ullrich, & van Dick(2011), the main argument for providing public funding is policymakers' conviction that simply providing funds will remove financial limitations for new initiatives; hence, supporting the establishment and growth of new entrepreneurial organizations. However, a precise categorization is difficult to obtain because the landscape of public funding mechanisms is vast in number and substantially varied in quality (Achleitner et al., 2014). As a consequence, this dissertation cannot examine all public funding programs in the literature on entrepreneurship. Because new venture creation is necessary for social well-being and economic progress, this study concentrates on entrepreneurship at the seed and startup phases.

The investor's perspective is also addressed in the second dimension. At its root, the investor's viewpoint addresses the subject of determining what constitutes a successful investment. For

young businesses, risk capital funding may be a viable alternative to internally generated funds due to the lack of collateral and high possibility of failure (Croce, Martí, & Murtinu, 2013; Sapienza, 1992). This type of finance is best suited for innovative new businesses that have both a high growth potential and a high level of risk in their business plan (Engel & Keilbach, 2007). The terms “business angels” and “venture capitalists” relate to two primary categories of investors who are often used indiscriminately despite the fact that there is no legal definition for either (Amit, Brander, & Zott, 1998), which makes their meanings rather ambiguous. Finance to startup companies are known as venture capitalists since they are the first to invest in the company (Mason & Harrison, 1995). Rosenbusch, Brinckmann, and Müller (2013) described the characteristics of a business angel as a former executive of a major organization, or a previous company owner, who contributes his or her time and money to new companies (Rosenbusch et al., 2013). A business angel’s considerable expertise enables them to participate in the seed and startup phases of a newly founded firm, since their knowledge gives the greatest pull and the charge is low, which is in line with their financial resources (Elitzur & Gaviious, 2003). Furthermore, in the early phases of development. To put it another way, the experience of a business angel is positively associated with the success of a new venture (Byrdin et al., 2004). Business angels, on the other hand, have less financial scope than venture capitalists, who invest a larger sum of money from several lenders (Sirén, Hakala, Wincent, & Grichnik, 2017).

### **2.2.3.3 Venture Capitalist Financing**

An entrepreneur’s access to management knowledge is limited to their personal entrepreneurial abilities and competences, and the network of business professionals to whom they have access. An entrepreneur may have non-economic aims, such as hedonistic and altruistic ones (Wright, 1998); as a consequence, an entrepreneur's investment goals are not usually the same as a venture capitalist's. However, the number of specialist VC companies targeting new businesses is growing (Dimov, Shepherd, & Sutcliffe, 2007; J.-H. Kim & Wagman, 2016). Investment management financial intermediaries are most suited to early-stage and developing enterprises lacking financial resources, management expertise, and a professional network (Jeng & Wells, 2000). Venture capitalist as private investors and managerial skills relates with RBV (Bessler & Kurth, 2007; G. D. Bruton, Chahine, & Filatotchev, 2009), formal and professional type of investing, (da Silva Rosa, Velayuthen, & Walter, 2003; Gompers & Lerner, 2001; Hellmann & Puri, 2000). Furthermore, a VC investment is distinguished by active participation in the

new business enterprise (Sahlman, 1990). Corporate VC, bank-affiliated VC, governmental VC, and individual VC are the most common types of VC nowadays (Bertoni, Colombo, & Quas, 2015).

As a consequence, venture capitalists or entrepreneurs might invest in incubation centers with the help of corporations or governments. They are sub-divisions of a larger non-profit or government entity (Hopp, 2010; Keil, Maula, & Wilson, 2010). For their part, individual venture capitalists pose as sole partnerships, raising funds from outside investors with the promise of capital growth. As a consequence, venture capitalists invest and manage cash from huge firms, governments, and wealthy individuals. Among the most important investment goals are risk diversification, capital growth, and strategic investing. Unlike corporate or government venture capitalists, who are organized as a division in an organizational chart, a VC fund's organizational structure is unique. The investment vehicle (VC fund) is technically handled by the general partners (Geigenberger, Stitt, & Fernie, 2004).

#### **2.2.3.4 Private Individual Financing**

A new VC fund's general partners raise funds from wealthy people, huge corporations, and institutional investors. Limited partners are the individuals who provide the capital. The holding term is defined mostly by 15 general associates' active managerial assistance to the business or incubation centers (Agarwal & Bayus, 2002; D. J. Cumming & MacIntosh, 2001).

Finally, equity financial institutions most closely fit the ideas and aims of VC and venture capitalists. Individuals may directly participate in new enterprises through equity crowdfunding in return for ownership or equity-like assets. The latter version is reliant on the legal context, since many nations currently have rigorous investor protection legislation and rules (Vismara, 2016). As a direct consequence of this, conventional mutual financial institutions are rare, and their significance has only lately been on the rise, as seen by recent legislation in the United States such as the Restart Our Business Startups Act (JOBS). which reduced investor protection requirements (Hatzopoulos & Roma, 2017). Owing to many legislative limitations designed to safeguard small and novice investors, equity and loaning money platforms are not available to a broad variety of investors. Because reward-based platforms are widely accessible, match the entrepreneurial finance viewpoint on development, and satisfy the individual investor's need for a meaningful return on investment (ROI), this form is central to this dissertation. The third entrepreneurial finance viewpoint is that of the

asset management company analyzing an investment to maximize profits (Achleitner et al., 2014).

### **2.2.3.5 Smart Money**

Smart money is the managerial help that venture capitalists offer in complement to their financial support. Efficient procedures include setting up accounting systems, finding consultants or important executives, and giving strategic advice (Arqué-Castells, 2012; Balboa, Martí, & Zieling, 2011; da Silva Rosa et al., 2003; Sirén et al., 2017). Overall, these procedures are meant to promote the positive entrepreneurial development of a new enterprise and so prevent the risk of bankruptcy. The general partners are compensated for their supervisory function by receiving a proportion of the entrepreneurial finance (typically 2%), which is used to offset the administrative costs associated with portfolio company management. Its portfolio companies are sold during or after the fund's life, with the revenues going to the existing shareholders. Capital gains are shared between general partnership partners and distributed according to the fund's initial agreements.

The portfolio companies are intended to grow in value as they enter new markets and/or commercialize innovative product and services, while the general partners invest to raise their capital contributed. Despite the significance of the management staff, venture capitalists are held responsible for ensuring that their portfolio companies beat non-VC enterprises on different performance metrics (Alperovych & Hübner, 2013; Bertoni et al., 2011; Di Croce & Helin, 2013; D. A. Grimaldi, Engel, & Nascimbene, 2002). As a result, venture capitalists are able to "discover companies with hidden value and give them with the necessary funding" (Bertoni et al., 2011).

The empirical data on the treatment and classification effects of VC investments is inconsistent when it comes to this topic. For example, a study conducted by Croce et al. (2013) examined 696 businesses and found that the productivity of VC-backed organizations was not substantially different from that of non-VC-backed enterprises before receiving their first round of investment. They asserted, on the other hand, that VC engagement boosts productivity, leading them to conclude that the success of the investee enterprises is the result of a treatment impact rather than a screening effect in their analysis. Balboa and colleagues (2011) arrived at the same conclusion. They gave actual evidence showing the engagement of venture capitalists contributed to the growth of the firms studied in terms of sales and staff numbers. The findings

of studies conducted by Davila et al. (2003) and Engel (2002), however, suggested that the effects of VC involvement were confined to an increase in employee growth and total factor productivity, respectively. Furthermore, (Colombo & Murtinu, 2017) used a sample of 259 VC-backed firms to analyze whether individual and corporate VC firms perform differently in terms of portfolio firm performance. They concluded that investee firms of both categories of VC investors improved their performance mostly in terms of sales volume. They claimed that the increase in performance was due to the engagement of either type of VC, rather than a potential selection effect (Colombo & Murtinu, 2017). In their analysis of 1,881 VC-backed and 185,882 non-VC-backed manufacturing enterprises, (Chemmanur et al., 2011) showed that the efficiency of enterprises that received VC was greater before and after the investment. Their study provided strong evidence for the presence of a selection effect. They did, however, observe that the efficiency development of venture capital-backed organizations was greater than that of non-VC-backed enterprises. As a result, it seems that venture investors prefer higher-quality enterprises over those that are believed to be of lesser quality. It is important to recognize, however, that the value-added given by VC investments should not be neglected, which implies that a treatment effect exists. (Chemmanur et al., 2011) examined the R&D and performance attributes of VC-backed and non-VC-backed enterprises in China. According to their findings, VC-backed firms outperformed non-VC-backed firms in terms of financial and R&D performance both before and after a VC investment. Furthermore, in their analysis of 204 new ventures in the biotechnology industry, (Baum & Silverman, 2004) came to the same conclusion, so supporting the presence of both a treatment and a selection influence in VC investment. In particular, it is worth noting that all of the studies used unequal-sized samples that were distributed throughout industries and between time periods and geographical areas. Thus, it is possible to detect a treatment and/or selection impact above and beyond the scope of a single random sample size, indicating that the hypothesis concerning venture capitalists' added value is externally true.

Because of the importance of this as-yet-unexplored issue, a large component of this dissertation also examines the function of VC involvement in the formation of new enterprises. If new initiatives backed by VC outperform new firms not funded by VC, then the VC fund has an obligation to provide a return to its investors, regardless of whether a possible treatment or selection influence is responsible. This process of divestment is referred to as "exit" since the funds collected are divided among the investors" (Grichnik et al., 2017). Management fees, which are a fixed percentage charge that are typically in the range of 2% of the fund's volume,

are given to the fund's management in exchange for non-monetary assistance provided to the fund when the fund is invested among portfolio companies. In addition, the VC fund gets a percentage of the increase in value of the investee firms from the time they first join the fund until they are sold to a third party. Averaging around 20% of the total capital gain earned, the actual proportion of so-called carried interest is subject to discussion with limited partners during the fundraising process.

The buyout entrepreneur is a third kind of investor who is investigated in the spatial dimension of the investor pyramid. Unlike VC funds, buyout funds are focused on leveraging the acquisition of an existing firm with a huge amount of borrowed cash. In order to return the capital provider both principle and interest, the subject firm must create sufficient cash flow. This is a condition that venture capitalists do not typically require of new companies, but it is a requirement in this case (Rosenbusch, Rauch, & Bausch, 2013). However, despite the huge relevance of startup companies in the context of new concept of the “, as well as the influence of buyout funds for existing enterprises, this dissertation will focus entirely on Venture capital firms, and it will mix the viewpoint of the VC shareholder with the opinion of the entrepreneurs who is seeking money for a newly founded company during the seeding and startup phases of development. An additional kind of investor not previously considered is individual investors, who are referred to as "backers" in the context of crowd fundraising (Achleitner et al., 2014). Individual investors (i.e., average people) have just lately gained access to investment possibilities in new businesses as a result of the sudden but visible appearance of different types of crowdfunding platforms. As a fundamental concept, crowdfunding is a relatively new means of generating donations from a huge number of people by leveraging the power of the internet (Agrawal, Catalini, & Goldfarb, 2013; Ahlers, Cumming, Günther, & Schweizer, 2015a; G. Bruton, Khavul, Siegel, & Wright, 2015; Cholakova & Clarysse, 2015; Mollick, 2014). After the financial crisis of 2008/2009, crowdfunding's success as a serious alternative to the previously described somewhat traditional kinds of finance became especially evident. Since then, the number of platforms, initiatives funded, and funds invested has skyrocketed (Dushnitsky, Guerini, Piva, & Rossi-Lamastra, 2016).

In 2014, more than USD 16 billion in investment was raised through crowdsourcing around the world, with the figure predicted to rise to USD 34 billion in 2015 (Barnett & Chafee, 2017). On average, the overall investment volume offered by venture capitalists totals USD 30 billion per year (Barnett & Chafee, 2017). As a result, crowdsourcing has established itself as a viable

alternative to traditional fundraising methods like VC. There are many different types of crowdfunding: reward-based (e.g., Colombo & Murtinu, 2017; Mollick, 2014; Thies, Wessel, & Benlian, 2016), lending-based (e.g., Dushnitsky et al., 2016), and equity-based (e.g., Ahlers, Cumming, Günther, & Schweizer, 2015b; Lukkarinen, Teich, Wallenius, & Wallenius, 2016). For the most part, this is owing to the fact that different forms of crowdfunding are also referred to as a packed stadium, with the supporting mechanism The buyout entrepreneur is the third kind of investor that is looked at within the framework of the investor pyramid's geographical component. Buyout funds, as opposed to venture capital funds, are primarily concerned with acquiring an existing business by using a significant amount of cash that has been borrowed. The company in question has to generate enough cash flow if it is going to be able to pay back the capital provider not just the principal but also the interest (Dushnitsky et al., 2016; Mollick, 2014). Therefore, donation-based funding does not correspond with the typical entrepreneurial finance viewpoint of new venture development and will not be further researched. The other types of crowdsourcing, on the other hand, are particularly well-suited to the context of entrepreneurial finance research since a financial incentive is clearly present in these situations. Therefore, individual and non-professional (i.e., amateur) investors who participate in equity, loan, and reward-based crowd-financing platforms will comprise a wider pool of investors to be studied in entrepreneurial finance research as a consequence of this development. The reward-based model of crowdsourcing is by far the most popular of all the many forms of crowdsourcing (Dushnitsky et al., 2016). On the other hand, the sorts of crowdsourcing in which a financial incentive is obviously present are especially well-suited to the environment of entrepreneurial finance research. This is because a financial incentive is present in these instances. As a direct result of this change in the industry, ordinary person and non-professional (also known as amateur) investors who take part in equity-, loan-, and reward-based crowd-funding platforms will make up a larger portion of the investor population that will be the subject of investigation in the field of research on entrepreneurial finance.

#### **2.2.4 Services Offered by Business Incubators to Business Startups**

According to Matkin's (1990) comprehensive look at technology transfer, the primary goal of university incubators is to support regional economic development, with revenue sources for higher education coming in second. Matkin (1990) described an incubator as "something between technical assistance programmes and university-related real estate developments," with the goal of "nurturing startup business initiatives through their critical early stages."

Matkin (1990) also stated: "a concentration of startup companies often attracts the kind of special expertise needed by such firms - accountants, legal advisors, venture capitalists, bankers, marketing specialists, financial managers, and so on," and that "incubator services include inexpensive office space, secretarial and office services." In order to develop clientele or in exchange for equity in the company, these specialists sometimes give services at below-market rates."

The University City Science Center, which opened in Philadelphia in 1963, was identified as the first university company incubator in Matkin's study. From a small beginning with public and private finance, it grew rapidly and successfully, with a workforce of 115 scientists, a budget of USD 10 million, and over 80 projects involving 100 enterprises and 14 universities by 1986/1987. "Few of the incubators that have been built since this one have proven as successful." The copyright holder's permission was obtained. Without permission, further replication is not allowed. He summarized the benefits and drawbacks of incubators. The benefits include the symbolic representation of the university's interest in regional economic development provided by incubators, as well as the possibility that successful incubator graduates will provide research contracts, direct revenue from equity positions, consulting opportunities for faculty, or jobs for graduates. He mentioned that the benefits are indirect and take a long time to manifest. "Business incubators are basically a community service provided by the institution," he added. Business incubators are rarely inextricably linked to the university's primary functions of teaching and research. As a result, their role in the university is frequently ambiguous, prone to faculty misinterpretation, and in constant need of explanation and justification.

However, despite being predictive in some ways, Matkin's ideas failed to recognize the expansion and changes in university incubators over the last decade. In a survey of 50 incubators conducted in 1995, Tomatzky and colleagues discovered that university incubators were becoming much more than institutions that just promoted general economic development. These incubators also took advantage of the university's unique setting to provide incubator services not accessible in other incubators. Stankiewicz started his article "Science Parks and Innovation Centers" in Etzkowitz (1998) with a summary of the criteria that various scholars have decided are vital to the success of these university parks and centers: (1) a technological wave, (2) a favorable general economic climate, (3) demand from other high-tech industries in the area, (4) academic infrastructure leadership for technology innovation, (5) university and

corporate R&D quality, (6) regional industrial activities, (7) skilled labor availability, (8) entrepreneurial culture, and (9) established financial institutions.

This literature review is really beneficial since it highlights the difficulty of analyzing the literature to decide not just whether they are effective. A convincing example of literature that is intrinsically antagonistic to the idea of technological commercialization is a cover piece in *The Atlantic Monthly* in March 2000 (Press & Washburn). The book, *The Kept University*, examines various technology transfer attempts, such as the creation of incubators, and includes numerous examples of either unsuccessful ventures (such as Boston University's Seragen catastrophe) or faculty that have fully embraced entrepreneurship. Stanford's Garry Nolan, an assistant professor of molecular pharmacology, was cited in the *Atlantic* as a faculty member who seemed overly eager. "There's almost no bigger and more immediate response than when you find a commercial organization interested in what you're doing," the \$50 million in venture cash he's attracted to his company (p. 47). This comment stands in sharp contrast to the more typical professorial tasks of mentoring students and discovering new ideas to publish and discuss in the classroom. The lengthy essay goes on to describe how difficult it is for most institutions to make technology transfer lucrative, concluding, "Rather than constraining colleges, the difficulty in making a profit appears to have emboldened them." For example, an increasing number of colleges are purchasing stock holdings in the companies that profit from their faculty's research, a move that elevates the likelihood of conflict of interest while also being financially risky (p. 47).

It is not uncommon for a business to offer shares in exchange for cash, space, or expertise from an incubator. In most cases, a startup's primary "coin" is its good ideas and hardworking employees, therefore stock in the company and its employees are the only "coins" it has. The copyright holder's permission was obtained. Without permission, further replication is not allowed. The *Atlantic* authors, on the other hand, were quite critical of colleges investing in fledgling companies as VC. Despite this example from the media, most incubator literature considers that incubators are not intrinsically bad, and instead concentrates on defining the goals, activities, and output of incubators (in line with Stankiewicz's (1998) last two categories). Some useful definitions are helpful while looking through the incubator literature.

Blakely and Nishikawa (1992) used metaphors of incubators to better understand how business incubators are intended to function; a look at some common uses of incubators helps to explain the important characteristics of an incubation environment: the hothouse, laboratory oven for

micro-organism cultures, specifically built crib for at-risk infants, and poultry hatchery. To maintain optimal circumstances, each of these cases has a safe, controlled environment. They combine the nutrients, therapies, and stimulation designed to promote and sustain development, in addition to typical ambient factors like light, temperature, and humidity. It is crucial to remember that not every person requires the care of an incubating environment; selection is required to determine which businesses are fragile and would benefit from incubation. The incubator is normally only used during the fledgling stage and is not meant to be used indefinitely.

In support of this concept, Nee (1999, p. 72) wrote: "Incubators often don't invest in as many ventures as traditional private investors - the amount of support they offer is significantly more time-consuming." Two other academics proposed typologies to understand the world of incubators' frameworks. To begin, Allen and McCluskey (1990) classified university incubators into four types: (1) for-profit property development incubators that aim to profit from real estate appreciation; (2) non-profit development businesses that aim to create jobs and improve the entrepreneurial climate; (3) academic incubators that aim to commercialize university technology while also providing local jobs; The copyright holder's permission was obtained. Without permission, further replication is not allowed. (4) physical for-profit capital incubators seed fund managers that seek to include the companies in their portfolio at a single address (p. 61). Second, Sherman and Chappell (1998) described five types of incubators with an emphasis on industry: 1) mixed-use development, 2) manufacturing, 3) technology, 4) service, and 5) micro-enterprise/empowerment (p. 313). Sherman and Chappell's industry categories overlap to some extent with Allen and McCluskey's incubator provider typology. However, both cases highlight that incubators are multifaceted and diverse, making determining best practice very challenging. When the issue is limited to academic incubators, the discussion becomes much more focused. Biotechnology and high technology are two terms that are often used interchangeably. The challenge, according to Sherman and Chappell (2012), is that most studies have "suffered from a problem that is common to many economic development programmes: a concentration on process rather than outcomes and impacts" (p. 315).

Finally, Blakely and Nishikawa (1992) developed a typology of incubators based on "degrees of incubation," which focused on services rather than incubation providers or industry (p. 241). Their research focused on biotechnology incubators, with the incubation analogy shifted to

"levels of effort ranging from minimum caring to more substantial biotechnology cultivation." The copyright holder's permission was obtained. Without permission, further replication is not allowed. "Economic development is not a science, but a process," they claimed. The emphasis on procedure makes it more difficult to simply put together the necessary components and plan for a successful incubator. To be successful, you need a combination of components (both live and inanimate), effective timing, proper positioning, and a few other things. One of the primary issues in evaluating effective incubator practice is the concept of time and location variation (pp. 248–249). The services of business incubators are measured using different dimensions, such as training programs, networking services, capital support (Li, Ahmed, Khan, et al., 2020) and technical support business advice (Ellefson, Kilgore, Skog, & Risbrudt, 2011), which have a significant impact on startups. Internal business incubator networks are developed between new companies in the same incubator (Soetanto & Jack, 2013). Drawing on the co-production principle, new incubator companies' engagement and collaborative efforts evaluate incubated outputs which further encourage the growth of new companies by creating market value (Branstad & Saetre, 2016). In an incubation network, new companies seek resource integration by creating separate and interdependent relationships. This encourages long-term collaboration in R&D and production and promotes their growth through mutually beneficial actions and new value creation. Such companies can pass and absorb the information needed by increasing the co-production behavior and the positive interactions between new businesses (Ferri, Deakins, & Whittam, 2009).

### **2.2.5 Entrepreneurial Finance for Business Startups**

The role of entrepreneurial finance is quite crucial for business startups and entrepreneurs and is directly linked with the economic growth and development of a country. It is quite important that the new startups and businesses that are developed and designed by entrepreneurs gather finance so that their ideas and plans can be implemented effectively (Fraser et al., 2015). This means that better entrepreneurial finance leads to more business startups as they will feel encouraged by getting proper financial resources for their business plans (Howell, 2020).

Several scholars have conducted studies on entrepreneurial finance in an attempt to clarify the concept's meaning (Fraser et al., 2015). Mustapha and Tlaty (2018) used an exploratory technique to look at what past research had found concerning entrepreneurial finance in their study on the found that very little money was spent on the startup of new businesses. Rita and

Muharam (2018) looked at the supply side of entrepreneurial finance, and the theory that underpins it, as a novel concept, as well as alternative possible approaches. On the supply side, they looked at crowdfunding as a financier or capitalist investor both angel investors and fund providers are welcome. The number of startups, as well as the vitality and succession of enterprises, have all been connected to the availability of financial resources. According to the World Bank's Investment Climate Surveys, access to finance improves business performance. It promotes not only market entry, firm growth, and risk management, but also innovation and entrepreneurship. Furthermore, businesses with greater finance are better positioned to take advantage of new business development and investment opportunities. Expanding finance access, to put it another way, will boost overall economic performance (Dalbergh, 2011). However, starting a business from the ground up is a completely unique experience. Talent, skill, technological know-how, and funding are unquestionably required to launch a successful startup (Štefko, Fedorko, Svetozarovová, & Nastišin, 2021). As well as all these intangible assets, the foundations of any business ventures can be based on a RBV, which can be used as a competitive edge later.

The entrepreneur to select whether or not to invest in such a firm. Entrepreneurial skills are not being exploited, according to observations of laxity and non-performing small-scale firms. Given the opportunity provided by the presence of entrepreneurial finance to reduce the losses sustained by company startups as a result of ignorance, the question that arises is how effective entrepreneurial finance has been in reducing the failures of early startups. The gap this article addressed was whether startups are using the presence of entrepreneurial finance.

(Parker, 2018). Entrepreneurship is also used to establish and achieve competitive economies at national and international levels (Aparicio, Urbano, & Audretsch, 2016). According to Bjørnskov and Foss (2016), entrepreneurship encounters some challenges in its completion. As a result, it will need the help of a variety of people in the sector. When numerous people come together to take thoughtful and coordinated action for entrepreneurship growth and development, an entrepreneurial ecosystem is formed (Samila & Sorenson, 2017). With better descriptions and reconceptualization based on earlier studies, it was discovered many studies in the domain of entrepreneurial finance, Auken and Neeley (1996) To evaluate the hypotheses, they used descriptive analysis of frequency counts, means, and tables, as well as Chi-Square. More than 10,000 respondents used bootstrapping to fund their startups, according to the report. Using existing literature, Fraser et al. (2015) explored the existing knowledge on the link

between entrepreneurial financing and competitiveness. They believed there was a need to look into the supply side of investment funding.

A study conducted by Malki, Uman, and Pittino (2020), which used SWOT analysis and unit analysis, improved the subject of entrepreneurial finance. The report began by identifying existing dangers, vulnerabilities, and gaps in the discipline, indicating the need for more research in that area. It was suggested that preliminary research be conducted on the area.

Angerer, Brem, Kraus, and Peter (2017) investigated the notion behind equity crowdfunding success factors in German startups on nine platforms, mostly using scientific information, and found that startups in Germany benefit from crowdfunding due to possibilities and market impacts. Business model, funding, the pre-campaign phase, advertising activities, and campaign activities all have a substantial impact on startups in Germany, according to the findings. They suggested that this field be researched further.

Wang and Schøtt (2020) looked at startups integrated in networks involving investors and researchers as a new endeavor that combines funding and innovation. They claimed that business startups are driven by innovation, which is either unrelated to or tied to money. Entrepreneurs from all around the world were interviewed in order to provide a representative sample. They found that funding and innovation are loosely or firmly related, and that funding and innovation are boosted as a result of researchers and investors networking, and that synergy helps.

The ability of startups is aided by the embeddedness of coupling. The paper aided capability development and theory development. Bellavitis, Filatotchev, Kamuriwo, and Vanacker (2017) investigated developing funding sources for company startups and their contributions to entrepreneurship literature and theories while studying entrepreneurial finance as a novel concept in research. Traditional funding sources were discussed, as well as the difficulties that business startups face. They addressed potential challenges to existing sources of finance for entrepreneurs, as well as research opportunities.

Terungwa (2011) conducted a statistical analysis of data for an empirical assessment of a SME equity investment plan in Nigeria, using the state of Nasarawa as a case study, utilizing mean scores and standard deviation. According to the results of the research, there is no statistically significant link between loan accessing requirements and the amount of credit issued by banks,

explaining why small-scale entrepreneurs were unable to obtain credit. Again, institutional financial sources are unlikely to have a big impact on the growth of SMEs in Nigeria. The study advocated for more comprehensive loan disbursement procedures to investors. Maximum gains (profit) are anticipated to justify the financial resources in every startup business, while net profit and efforts provided are intended to justify the capital spent (N. Allen & Hall, 2008). According to Adejoh (2013), costs are incurred in every aspect of preparation that individuals make to obtain startup financing, from their own personal savings and family. In order to support SMEs and help Nigeria's teeming unemployed youngsters, the government established a number of organizations, including the Community Bank, the Nigeria Industrial Development Bank, and the Nigeria Agricultural Corporative Bank. Up to 64 million of Nigeria's 80 million youngsters, or 60% of the country's overall population. Despite the government's increased efforts to finance SMEs, evidence of their usage of these financial organizations' resources is sparse. Whether it is from friends or from outside sources, everyone is working to increase investment.

Entrepreneurship experts are available to help new startups get off the ground. It is finance Gumpert (2002) is the process of making financial decisions for tech startups. It covers the finer points of starting a new business, such as the worth of the company, the required initial capital based on the type of business, and the cost of raw materials. Entrepreneurial finance, according to Fayolle (2002), is concerned with allocating resources to various parts of a business startup, such as trading, consulting, manufacturing, and so on. It disaggregates the business's expenditures and funding patterns, identifying sources and periods of ROI. It allows the business venture owner to estimate the amount and timing of money required to start and maintain a business. It is up to the entrepreneur to select whether or not to invest in such a firm. Entrepreneurial skills are not being exploited, according to observations of laxity and non-performing small-scale firms. Given the opportunity provided by the presence of entrepreneurial finance to reduce the losses sustained by company startups as a result of ignorance, the question that arises is how effective entrepreneurial finance has been in reducing the failures of early startups. The gap this article addressed was whether startups are using the presence of entrepreneurial finance.

(E. Penrose & Penrose, 2009) highlighted the importance of firm's inner resources through presenting an RBV of a firm and stressed on containing as competitive assets. All types of resources were included in these, like materialistic, human and firm's related investments

(Fichter & Tiemann, 2018). According to Amit and Schoemaker (1993), technological know-how is a firm-specific resource that distinguishes a business from others (rare), customers will utilize the company's products and services, and these elements are essential in explaining business performance (value) and things connected with RBV. Each firm has its own technology know-how, market ability, and design and technical capabilities, making it inimitable: it cannot be readily imitated, copied, or applied to another business. Businesses have to build ties with external partners and improve their goodwill. Partners are willing to contribute significant resources, with a focus on startups. Throughout the entire startup process, resources might be both tangible and intangible (Watts et al., 2021). These elements are linked to RBV since tangible and intangible assets are all synonyms for the word "resource" in RBV. Intangible assets include human, organizational, and social capital, whereas tangible assets include plant, facilities, and finances (J. S. Coleman, 1988).

Considering founders are the motivating factor behind critical choices, entrepreneurial characteristics may thus play an extremely vital role in gaining a knowledge of financial decisions (Cassar, 2004). One of the essential resources for the launch and ongoing growth of running a business is access to financial capital (Gilbert, 2006). Entrepreneurs' financial decisions are crucial, as they have substantial ramifications for procedures, risk of catastrophe, concert, and the future growth possible of businesses (Cassar, 2004; Fryges & Wright, 2014; Gilbert, 2006; Michaelas, Chittenden, & Poutziouris, 1999). This model presupposes that all business owners have unrestricted and direct access to that information, which enables them to make holistic choices about their finances with the intention of increasing their wealth as their ultimate objective (Brealey & Myers 2000). Furthermore, in this view, the supply and demand for money are in balance, implying that all value-creating initiatives will be able to secure funding.

While entrepreneurs are essential decision makers in creating their enterprises' entrepreneurial strategy, the literature on the relationship between entrepreneurial qualities and financing strategies in entrepreneurial ventures is still in its early stages (Seghers, Manigart, & Vanacker, 2012). Along with these there are other factors which play an influential part in the entrepreneurial mechanism, like government regulations, and EO has been studied in individual studies but fresh addition in literature make them available on single floor which is a uncommon attempt.

Entrepreneurs can learn about financing options through their social capital in addition to their human capital. The ability of actors to extract benefits, such as knowledge, from their social structures, networks, and affiliations, is important to social capital theory (Adler & Kwon, 2002; Granovetter, 1985; Lin, Ensel, & Vaughn, 1981; Portes, 1998; R. D. Putnam, 2000). While it is widely acknowledged that acquiring financial resources is an important step in the startup and growth of a new business, our understanding of the process is largely based on economic theories that emphasize wealth maximization as the overarching goal, rational behavior of all actors, and information asymmetries (Seghers et al., 2012). But here we are confronting the economic theory of entrepreneurship and the RBV of a firm, and the variables involved are business incubators, entrepreneurial finance, business startups, EO, social capital, government regulations and entrepreneurial development, showing a try to spread different colours on one canvas.

### **2.2.6 Business Incubators on EO**

Clausen and Korneliussen (2012) explained the relationship between a business incubator and EO, and concluded that there is a positive association. Wiklund and Shepherd (2003) concluded that there is a positive association between entrepreneurial exposure and business incubators. The following literature review is primarily centered on the EO and RBV literature within the entrepreneurship and strategy disciplines. The EO construct has been widely adopted within the entrepreneurship literature, but operationalization of the construct has remained a contentious issue. Drawing on the strategy literature, RBV's origins and development, competitive advantage and how it outlines the framework. This is followed by a discussion of firm resources, capabilities and dynamic capabilities, with a deeper focus on the specific dynamic capabilities of exploration and exploitation. Exploration and exploitation are considered important measures of an incubator, which can help unlock the potential benefits of EO, which in turn may be enabled or disrupted by the EO of the incubator centers. Through the joint consideration of a firm's resources, dynamic capabilities, EO and its dimensions, a more complete explanation of firm performance is attained than if they were considered independently. The final section discusses the linkages that exist between the EO and RBV literature and provides a contextual background for the literature review, by examining the relevant implications of the micro-firm context and the study's host country. Analysis of EO in micro-firms provides benefits relative to its study in larger organizations, due to the greater likelihood of the EO tendency of entrepreneurs in smaller firms to influence the overall posture

of the firm as opposed to managers in larger firms. Thus, according to Miller, the dimensions of EO are such that their ability to forge an advantage over their competitors cannot be exploited in isolation from each other. Rather, Miller conceptualized that EO is highest when all the individual components are high and interact with each other to form the basis of an advantage. Based on the theory put forward by (Covin & Slevin, 1989; Miller, 2011), Miller (1983) and Covin and Slevin (1989) were the first to operationalize the proposed construct. Using five items from existing instruments (Khandwalla, 1976; Miller & Friesen, 1986) and four additional original items, they developed a nine-item scale that comprised three measures for each of the components. The three dimensions of EO put forward by (Covin et al., 1990; Miller & Shamsie, 1996) have been consistently utilized in the literature since their introduction. As described by (Andreas Rauch, Johan Wiklund, George T Lumpkin, & Michael Frese, 2009): Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. Risk-taking involves taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures in uncertain environments. Proactiveness is an opportunity seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand.

Covin and Slevin (1989) measured the level of innovation through responses to three questions, anchored on scales of 1 to 7. The first, measured the emphasis on existing products and services as opposed to the emphasis on R&D or technical leadership. Firms that place less emphasis on their existing product and service lines are assumed to be more likely to employ new and innovative ways of serving their customers. Next, the amount of new products and services introduced in a past period (e.g., five years) is measured, ranging from no new products, to many new products. In this instance, there is a direct correlation between the amount of new products and services that have been introduced in the period and the level of innovation. Finally, beyond the frequency of innovation, the scale and scope of innovation is measured through responses to the scale of changes to products and services as minor or dramatic (more or less innovation, respectively).

Proactiveness was also measured using three items, anchored on a scale of 1 to 7. In the first item, individuals were asked to reply to the statement (Covin & Slevin, 1989), “In dealing with my competitors, my firm usually responds to competitive actions” or “initiates actions that

competitors would then respond to,” representing less or more proactiveness respectively. Next the authors asked firms about the frequency of being first to market with new products, services, operating methods and administrative techniques, ranging from seldom to often. Finally, the avoidance of competitive clashes (low proactiveness) or willing engagement in them (high proactiveness) is measured. To measure risk-taking, Covin and Slevin framed two of the three questions from the view of top management, while the third asks the respondents to consider the view of the firm. The first question asked respondents to consider management’s proclivity for low-risk projects with normal rates of return (low risk-taking) versus a high proclivity for riskier projects that offer the possibility of higher return (high risk-taking). Next, they measured risk-taking by asking if due to the environment, respondents found that top managers in the firm found it better to be timid and gradually explore the market (low risk-taking) or if a wide range of bold actions was better (high risk-taking). Finally, they measured risk-taking through responses to the firm’s position as either being a cautious “wait-and-see” approach to decision making or a more aggressive posture in the exploitation of potential opportunities. One apparent shortcoming of the EO measure as described above, is its tendency to switch its levels of analysis. For both innovation and risk-taking, two questions are at the firm level, while the third is at the management level, and further, proactiveness is operationalized entirely at the firm level. An individual(s) tasked with responding to the EO scale on behalf of the entire firm, or even only its top managers, may be limited in his or her knowledge of the firm or its TMT. Further, in the event of variation in EO between employees or managers (e.g., some risk takers and some who are risk averse), it is difficult to accurately provide responses to the measurement, as the effects of individuals on the overall posture may be difficult to quantify. As noted previously, micro-firms were utilized in the study, or those with less than five full-time employees, in an attempt to minimize the implications of this level switching. Although the items of the scale were intended to measure different aspects of EO, Covin and Slevin (1989) conducted factor analysis to determine factorial validity (Allen & Yen, 1979), with the belief that if all the items were loaded onto a single factor, the items would suggest some unidimensionality or correlation with EO.

In a reflection on his 1983 work, Miller (2011) acknowledged that based on his belief that entrepreneurship would manifest itself differently, dependent on the context, he developed the scale as a collective catchall that would capture “risk-taking in the small firm, innovation in the high-tech company, and proactiveness in an ‘intrapreneurial’ giant” (p. 874). He reflected that he was initially worried that the items would not relate significantly, but that in the end, he

need not have been. Covin and Slevin's (1989) work showed that all of the items did in fact load onto a single factor, with each of the items loading above 0.5, at an average loading of 0.66. Additionally, they reported an inter-item reliability of 0.89, scale mean of 4.33, and a response range of 1.22 to 6.78. These results are used as the basis for the continued utilization of a composite measure of EO and its treatment as a unidimensional reflective construct, which will be discussed in greater detail later.

### **2.2.7 Entrepreneurial Finance on EO**

Sidek, Mohamad, and Nasir (2016a) pointed out the relationship between SMEs, which helps move the economy toward achieving sustainability goals. Furthermore, this study also concluded that some external and internal features affect SMEs but the most important is EO. Covin and Lumpkin (2011) also studied the relationship between EO and financial resources (entrepreneurial finance), and concluded direct and same directional causality.

EO and access to financial services are intertwined. Even if the previous literature does not indicate a direct relationship between them, all strategic intentions and plans cannot be fulfilled without appropriate resources (J. Tang, Tang, Marino, Zhang, & Li, 2008). Covin et al. (2006) the possibility that EO dimensions may help the company get funding or other financial resources was brought up. EO opens many chances for business performance and access to external finance too. Mukiri (2011) stated that EO dimensions could encourage enterprises to receive capital or financial resources. While K. Huang, Wang, Kuo-Hisung, and Yien (2011) the entrepreneur to select whether or not to invest in such a firm. Entrepreneurial skills are not being exploited, according to observations of laxity and non-performing small-scale firms. Given the opportunity provided by the presence of entrepreneurial finance to reduce the losses sustained by company startups as a result of ignorance, the question that arises is how effective entrepreneurial finance has been in reducing the failures of early startups. The gap this article addressed was whether startups are using the presence of entrepreneurial finance. (Fatoki, 2012).

### **2.2.8 Moderating Impact of Social Capital**

We contribute to the existing body of present on social capital by introducing the concept of social capital as a moderator. We find that the network diversity of small business founders has the most significant effect on the development of the business (C. J. Stam, 2014). (Scholten,

Omta, Kemp, & Elfring, 2015) conducted an empirical study of 70 university spin-offs; they found that the network size or network strength of the founding team had a considerable beneficial influence on employee growth. In a research of 149 university incubation centers, (Walter, Auer, & Ritter, 2006) discovered a beneficial connection between a company's networks and its sales, recognised market edge, and considered the level of client interactions. The commitment of knowledge made by external companies is one element that contributes to the positive effect that social capital has on the success of corporations. As a consequence of this, the developer's network is directly correlated to the amount of information that is necessary and exploited to obtain a competitive advantage (Batjargal, 2003; Xu et al., 2012; Yli-Renko et al., 2001). Strong network relationships are critical for RBSOs to build their businesses, according to these studies.

According to the most recent research on RBSOs, These businesses have quite a social capital that is mostly embedded in the school setting, with just a few links to professionals working in other fields. Their social capital is pretty uniform (Lockett et al., 2003; Wright, Davies, Lau, McCall, & McKay, 2006). Academic institutions typically take steps to minimise an incubation center's less-than-optimal wealth and resources in terms that their network links. This is done in order to solve this fundamental insufficiency in educational entrepreneurs, and research institutions are frequently the ones to take these steps. The provision of assistance is one method that may be used to establish closer relationships with business partners that are not affiliated with academic institutions (Mosey & Wright, 2007).

Academic entrepreneurs are able to create essential network contacts with people outside of academia and develop relationships with them via particularly customised forums thanks to the many support programmes that are available. These programs frequently take the form of training courses and events that help academic entrepreneurs expand their network to include accountants, consultants, investors, and other industry experts. Furthermore, these courses provide a foundational understanding of entrepreneurship and management. To put it another way, these supporting programs are designed to improve the founders' managerial skills and personal network.

The current literature elaborated a durable connection concerning an entrepreneur's social capital and the discovery of emerging scopes (Arenius & De Clercq, 2005; Deller, Conroy, & Markeson, 2018; Ellis & Pecotich, 2001), Elfring and Hulsink (2002)\_ entrance to global

marketplaces (Zhou et al. 2007; Ellis (2000), firm admittance (Bastié, Cieply, & Cussy, 2013; P. H. Kim, Aldrich, & Keister, 2006), and knowledge growth and spillovers (Sapienza, De Clercq, & Sandberg, 2005). Current ongoing research adds to the findings of other studies by demonstrating how a small business owner's social network aids productivity by using intermediating channels to attain credit from dealers, secure finances from contacts, and grow the probability of prolonging credit to clients along with expanding customer goodwill.

The impact of social capital on entrepreneurial activity has piqued academic curiosity for a long time. Tocqueville wrote in 1835 that the potential for organization in the USA was one of the reasons for a healthy democratic state as well as a spirit of business (Kwon, Heflin, & Ruef, 2013). Many academics approve two ingredients of social capital (trust and social relationships), despite the fact that there are multiple alternative definitions and metrics (Knack & Keefer, 1997; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997; Paxton, 1999). "By 'social-capital' means that aspects of societal life - networks, customs, and beliefs which enable people to act with efficiency collectively to achieve mutual objectives" (R. D. Putnam, 1995). Social capital, according to (Fukuyama, 1995a), arises from a society's high level of trust; it may be found in least groups in society, in family, besides the major groups, at national level, and all related groups. Previously, research writer, (Inglehart, 1997) exert Tocqueville and Putnam to understand social capital as "a culture of trust and tolerance," involving enormous intentional connectivity system arise," echoing these themes. Community-related social capital reflects the nature of communal ties; it expresses the level of societal trust and breadth of organizational affiliations among inhabitants, and is considered a public capital rather than personal capital (Knack & Keefer, 1997; La Porta et al., 1997; Paxton, 1999). The author will look at each aspect of community social capital that could affect entrepreneurship levels. Knowing individuals' relationships necessitates understanding the institutions in which those ties are anchored, according to an organizational view of social capital. "By regulating their contributors' interfaces and deeds, organizations' be able to control that amount they create either, social or organizational bonds" (Small, 2009).

### **2.2.9 Moderating Role of Government Regulations**

A critical aim of job creation and economic development is the creation of employment in rural and urban areas. The vast majority of people in rural and urban areas who do not have acknowledged paid employment are heavily reliant on entrepreneurship (Friedman, 2011). The

link between entrepreneurship and industrial progress has been intensively investigated at municipal, state, and federal levels (Minniti & Lévesque, 2008). According to (Kumar & Liu, 2005), The contribution that the innovative business makes to employment as well as Economy is continuing to grow. As a consequence of this, it is advised that governments remove obstacles to entrepreneurship in order to stimulate the growth of the entrepreneurial sector. (Acs, Audretsch, Braunerhjelm, & Carlsson, 2004). It is generally accepted that, given its role as the primary impetus behind the expansion of entrepreneurial opportunities, the government would, to the extent that it is able, make available the necessary resources (Kumar & Liu, 2005). Some of these advantages is the creation of an atmosphere that is favourable to business, which will provide new companies a significant boost in their ability to expand. A course of action intended at regulating and improving the circumstances of SMEs in terms of support from the government, implementation, and financing rules is referred to as "government policy" in this context. According to this notion, government policy connected to entrepreneurship attempts to support entrepreneurship by establishing an environment that is conducive to entrepreneurs' growth and development. Entrepreneurship serves as the backbone of a country's road to industrialization; thus, by establishing guidelines that will manage entrepreneurial intention in general, the government must create laws that are user-friendly to businesspeople in order to be effective. According to Pals (2006), There is a requirement for economic policies connected to entrepreneurialism, and then these policies need to be successfully performed in order to accomplish the objectives of the guidelines. This requirement operates independently of which organization is currently in power.

Most governments, particularly those in poorer countries, have made significant investments in the past in time and resources in developing policies that promote entrepreneurship (Oni & Daniya, 2012); China, Brazil, Saudi Arabia, Malaysia, and Nigeria are just a few examples (Friedman, 2011). Through the use of various programs and resources, the Chinese administration has made aggressive efforts to foster the development of high-tech companies (Cullen, Calitz, & Chandler, 2014).

The Brazilian entrepreneurial movement has expanded rapidly over the last several years as a direct consequence of government programmes focused on the growth of both primary and secondary sectors (Etzkowitz, 2002). As recently as 2014, according to a research study conducted by Salem (2014), the Kingdom of Saudi Arabia launched an ambitious 10-year entrepreneurship and innovation strategy in 2010. The objective was to bring the Kingdom up

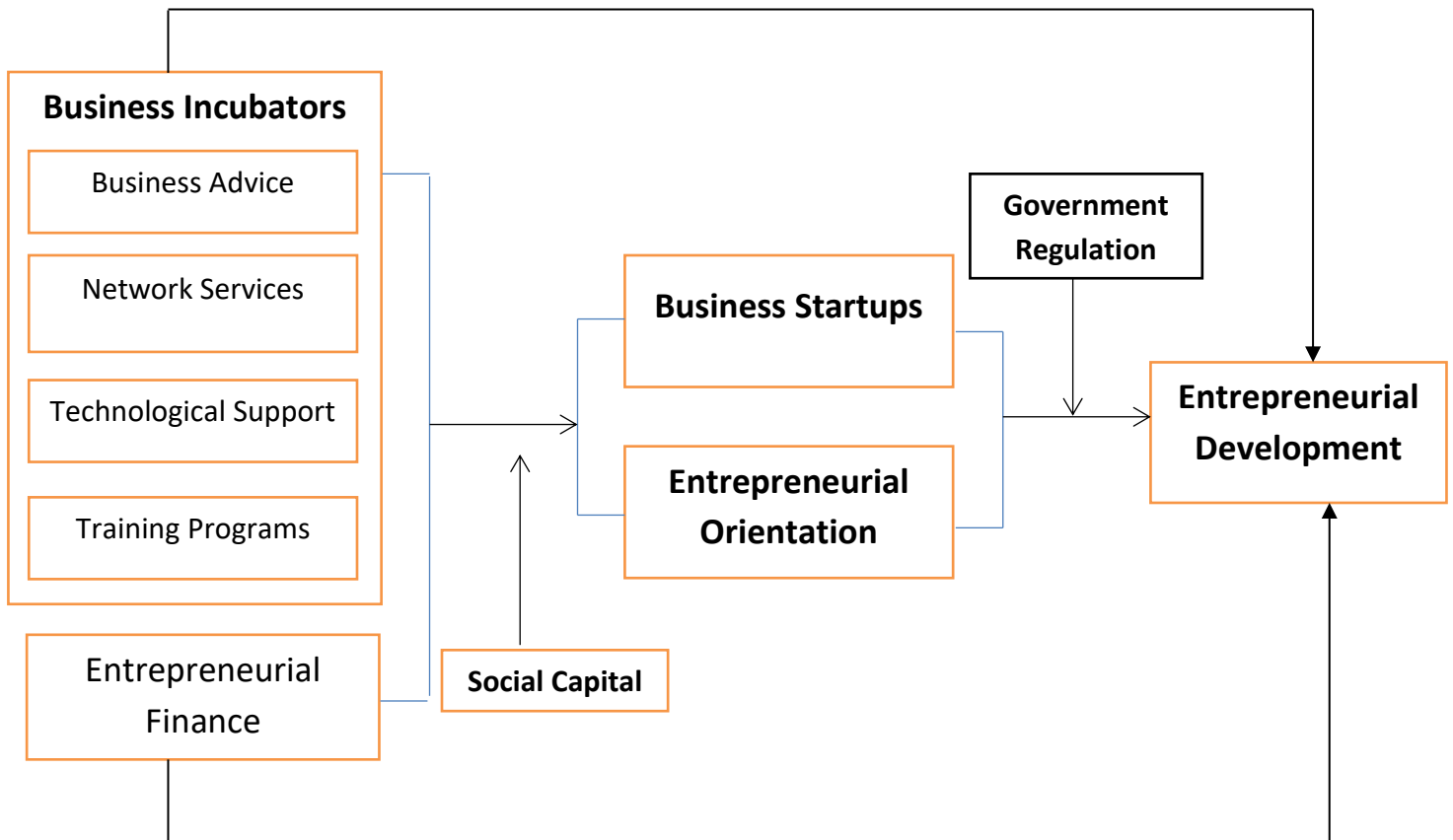
to the same standard as slightly elevated countries and those that are internationally competitive in terms of economic development (Salem, 2014). According to the government of Malaysia, various technology-financing organizations have been established with the purpose of offering wholehearted support to technological entrepreneurship as part of its endeavor to strengthen the nation by promoting the growth of technological entrepreneurship. For example, the government has established VC organizations with the purpose of stimulating investment in the sector organizations that are having trouble finding sufficient finance at the early phases of their development, such as technology companies (Ajagbe & Ismail, 2014). According to previous research, government policy is positively connected with entrepreneurship in the USA (Greene. F., 2012).

The foregoing demonstrates a discrepancy in the function of government policy in supporting entrepreneurship, particularly in developing countries. The association between entrepreneurship and outcome (dependent variable) was mitigated by government policy. It is important to emphasize, based on the preceding considerations, that there is still a void in the literature on entrepreneurship and economic development. By utilizing government policy to moderate the relationship between business startups, EO and entrepreneurial development, this study adds to the corpus of knowledge. Entrepreneurship provides four economic benefits, according to Van Praag & Versloot (2007): job creation, innovation, productivity, and growth. Researchers, analysts, and policymakers are now recognizing SMEs as critical to economies around the world, owing to their contributions to entrepreneurial development, income generation, output, and employment (OECD, 2017). In addition, various studies and scholarly papers (Dzafic & Babajic, 2016; Naudé, 2008) illustrate the positive association that this research finds to exist between entrepreneurial activity and economic growth. Some authors, such as (Campbell & Mitchell, 2012), hold the opposite viewpoint. They contend that certain types of entrepreneurship, such as unproductive and harmful entrepreneurship, might have a negative impact on economic progress in particular countries.

According to evidence from fast-growing economies, politicians who support entrepreneurship and innovation by providing a conducive business environment for the creation, economic expansion, and proliferation of SMEs reap an extraordinarily high dividend payment in terms of increased employment opportunities, especially for youth, economic expansion, and poverty reduction (Ayyagari, Beck, & Demirguc-Kunt, 2007). The presence of a positive association between the rate of entrepreneurship and economic growth and development has been shown

by a number of scholars (Dzafic & Babajic, 2016). Along with these there are other factors that have an influential role in entrepreneurial mechanism still in queue like government regulations and EO has been studied in individual studies but fresh addition in literature make them available on single floor which is a uncommon attempt.

**Figure 2: Research model**



## **Chapter Three**

### **Data and Research Methodology**

#### **3.1 Research Methodologies**

Not only does the researcher have to decide between performing a quantitative, empirical, or mixed methods study, but he or she must also decide between several sorts of studies within each of these three alternatives. Research designs are types of inquiry that are used in qualitative, quantitative, and mixed methodological procedures. They are forms of inquiry that offer particular direction. Someone else has referred to them as the inquiry strategies in a study design for procedures, which is a term that originated from the field of psychology (Denzin & Lincoln, 2011). Computer technology has improved our data processing and evaluation capabilities, and as people have articulated new approaches for doing research in the field, the number of design options open to researchers has expanded as well.

##### **3.1.1 Qualitative Research Designs**

Over the course of the 1990s and then into the late twentieth century, an increase in the number and range of qualitative research approaches became apparent. Anthropology, sociology, humanities, and assessment are all fields in which the phenomenological approach has its roots. Comprehensive procedures are now available for certain qualitative inquiry approaches (Clandinin & Connelly, 2004). Using a narrative research design, the researcher analyzes the lives of people and then invites one or more of them to share their stories with the researcher (Riessman, 2008). The story culminates with viewpoints from both the participant's and the researcher's life being woven together in a shared narrative (Clandinin & Connelly, 2004).

A phenomenological research design, which is grounded on philosophical and psychological principles, reflects the lived experiences of people in relation to a phenomenon as told by researchers. Various persons who have all observed the phenomenon share their own experiences in the last section of this narrative. This design method often requires interviewing witnesses and has deep philosophical foundations to support it (Giorgi, 2009; Moustakas, 1994). Based on the views of participants, grounded theory is a social psychological study process whereby an

organization builds a broad, abstraction theory of a phenomenon, activity, or interaction. This technique requires a large number of data collection phases, and the refining and interaction of many types of data (Charmaz, 2006; Corbin & Strauss, 2014).

Ethnography is a technique of research used throughout the social sciences and humanities that entails observing and documenting the common patterns of behavior, language, and activities of an ethnic community; interviews and questionnaires are routinely used to gather information.

When a researcher is doing a specific example, they will conduct an in-depth inquiry, which is often anything like a programme, event, activity, organisation, or one or perhaps more individuals. Case studies are used in many fields including assessment and are a sort of research design. A multitude of data-collecting strategies are used to acquire comprehensive information over a lengthy period of time in each case, which is determined by the duration and activity of the case. (Stake, 1995; Yin, 2009, 2011).

### **3.1.2 Quantitative Approach**

In the nineteenth century and early twentieth centuries, quantitative research approaches that reflected the epistemological worldview and evolved mostly in psychoanalytic theory were popular. Individualized or separate experiments are experiments in which a single individual or a small number of persons receive an experimental treatment and their behavior is observed over a long period of time (Cooper, Heron, & Heward, 2007; Neuman & McCormick, 1995). Comparative causality research is a kind of qualitative quantitative method in which the investigators compare two or more groups based on the presence or absence of a previously observed cause (or independent variable). Researchers use the correlational statistic to identify and measure the degree of connection among two or more dependent and independent variables in the correlational design, which is a non-experimental research approach (Creswell, 2012). Extensive structural equation models, which take into account causal pathways and the determination of the combined strength of many factors, have also been incorporated.

Survey research, which takes a portion of a population to represent the whole, may provide a continuous numerical picture of changes, attitudes, or points of view. Even included in the category are research projects that collect information via the use of questionnaire or organised studies with

the intention of extrapolate the findings from either a population to the whole community (Fowler Jr & Cosenza, 2009).

The purpose of carrying out exploratory study is to ascertain whether or not a specified intervention has an effect on a particular outcome. The researcher examines this by administering a particular treatment to one group while suppressing it from the other, and then comparing how well both groups performed on a certain result. Experiments include authentic ones as well as simulated ones. In experiments, subjects are allocated to treatment conditions at random, but in quasi-experiments, non-randomized assignments are utilized to determine treatment conditions (Keppel, 1991).

### **3.1.3 Mixed Methods Research**

The use of mixed methods in a research endeavor refers to the process of mixing or combining qualitative research methods and data. A questionnaire or a psychological test, for example, may provide closed-ended results, but qualitative data is typically open-ended, with no planned responses (as is the case with interviews). Mixed methods approach is a relatively new subject, with considerable development work starting in the mid- to late-1980s and continuing to the present. Its roots, on the other hand, may be traced back farther. In 1959, Campbell and Fisk conducted research on psychological characteristics using a range of strategies, albeit their approaches were not homogeneous. As far as hypothesis and objective of the study are concerned, it is observed that a quantitative approach is the most appropriate approach for survey-based studies (Sieber, 1973). Therefore, according to research philosophies, a quantitative approach is used to fulfill the objective of this study.

## **3.2 Research Approach**

The subsequent sections discuss the research strategy, demographic and sample size, research instruments, and data collection technique. The statistical approaches used to test the hypotheses are discussed in the final section. This section describes the methodological part of the study before selecting the tools and procedures. It is essential to follow the assumption of a particular research design adopted for the study (Creswell, 2003).

To this end, the proposed study examines the relationship between services provided by business entrepreneurial ventures and entrepreneurship and innovation finance on entrepreneurial development, as well as the mediating role played by nascent entrepreneurs and EO, as well as the moderating role played by government regulations and social capital, particularly in the context of Pakistani entrepreneurship. It has been determined that the quantitative approach is the method that will be most helpful in accomplishing the objectives of this research (Bryman, 2004). The reason behind using the quantitative research method is that following the aim of the study, the data can be collected quantitatively and can be analyzed statistically so that more accurate and reliable results can be obtained. This is the advantage of performing quantitative analysis and the purpose of the proposed study coincides with the quantitative research method. The hypothesis testing, which was done in accordance with the study's objectives, looked at the relationship between changes in one factor and modifications in one or more other factors using correlation coefficients (Isaac & Michael, 1981).

### **3.3 Population and Sample**

Punjab, KPK, Baluchistan, and Sindh are, geographically, the central provinces of Pakistan. G\*Power software 3.1, suggested by (Joseph F Hair, Black, Babin, Anderson, & Tatham, 1998), was used to select a minimum sample size (138) using the predictors. Thereby an effect size of 0.15 and power of 0.95 was taken. According to the criteria in this study, the sample size is above the minimum requirement. Another technique suggested the size of a sample required to evaluate a model: each item multiple by five (Joseph F Hair et al. (1998); Joseph F Hair, Ringle, & Sarstedt, 2011) According to Krejcie and Morgan (1970), a minimum sample size of 375 is required to run regression analysis. This study followed the Morgan criteria to calculate the sample size, which is based on 5% level of significance and 95% confidence level. The study's target population consists of startup managers and chief executive officer. In addition, questionnaires were presented to those had utilized the services of the incubator center and had, for the most part, one year to commence operation.

### **3.4 Data Collection**

In order to gather the information, and with the assistance of data collectors, the questionnaire was delivered (Joseph F Hair et al., 2011). It was utilized to estimate the specified model in SmartPLS in order to examine SEM. As a result of the planned study's goal, entrepreneurs from university incubation centers in Pakistan will be included in the study's population, which will be determined via the Higher Education Commission (HEC)<sup>3</sup> of Pakistan. The HEC has struck a deal with the Promotion of Education in Pakistan Foundation to develop business incubation facilities. The sampling method is a non-sampling approach in which components selected for the sample are picked based on the researcher's evaluation. Researchers usually assume that by exercising excellent judgment, they can collect a representative group and save time and money. Cases are picked with the aid of an expert's evaluation or with a specific aim in mind. When a complicated population has to be examined, intentional sampling is frequently used (Black, 2019). In the context of the current study, entrepreneurs who are associated with business incubators and entrepreneurial finance and have information regarding the role of government regulations and social capital will be chosen as the moderator in the study. They will be contacted beforehand and will be asked their permission to fill the survey questionnaire. The ethical considerations, as well as the purpose of the proposed study, will also be explained to them in detail before they fill out the questionnaire. A guarantee will be made that the information supplied by them, whether it is connected to the questionnaires or personal data, will be kept secret and will not be utilized for any purpose other than the study being done; this is one of the most important components of ethical concerns for participants.

### **3.5 Research Model**

The research framework for this study is shown as Figure 3.1. This model was developed after doing a literature analysis on the topic of the role that coworking spaces and entrepreneurial funding play in the creation of new businesses. According to the model, the responsibilities of

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<sup>3</sup> <https://www.hec.gov.pk/english/services/universities/EBIC/Pages/Established-BICs.aspx>

<sup>2</sup> <https://ideagist.com/list-of-startup-accelerators-and-incubators-in-pakistan/>

business starts and business orientation as mediators in the link between the services offered by entrepreneurial ventures and entrepreneurial funding in the direction of entrepreneurial growth are important. Social capital is shown to moderate the correlation between business incubators, entrepreneurial finance business startups and business orientation. In addition, government rules regulate the interaction between company starts, business orientation, and entrepreneurial growth and development. The hypothesized connections were based on a resource-based perspective, which argues that entrepreneurial advances may achieve higher performance via the use of entrepreneurial ventures and entrepreneurial funding. The hypothesized association was based on the hypothesized relationship. Services provided by business incubators and venture capitalists have the potential to influence entrepreneurial growth. Six direct and ten indirect linkages exist in general, with six being more important than the others.

### 3.6 Instrument of the Variable

**Table 2: Instrument**

Sr.	Variables	Items	Reference
1.	Services of Business Incubators		Sahban, Kumar, and Liba (2014), Li (2020)
	Business Advice	09	
	Network Services	06	
	Technological Support	10	
	Training Programs	07	
2.	Entrepreneurial Finance	6	Scott (2020)
3.	Business Startups	5	Li (2020)
4.	Entrepreneurial Orientation	9	Knight (1997)
5.	Entrepreneurial Development	5	Li (2020)
6.	Government Regulations	5	Scott (2020)
7.	Social Capital	5	Kritsotakis et al. (2008)

#### 3.6.1 Services of Business Incubators

The services of business incubators were rated as a unique construct employing four dimensions, and their items were adapted from (Sahban, Kumar, & Liba, 2014; Li, 2020). Table 2 lists the number of items in the business advice, network services, technological support, and training programs categories. On a Ranging from 1 (strongly to 5, with 1 denoting major disagreement and 5 denoting thorough agreement somewhat on topics presented, asked respondents to indicate the

degree to which they agreed or disagreed with the questionnaires provided in the subsection table. This was done using a five-point scale ranging from 1 to 5.

### **3.6.2 Entrepreneurial Finance**

For the purpose of assessing entrepreneurial finance, six questions from the Entrepreneurship Finance Survey were employed (Scott, 2020).

### **3.6.3 Entrepreneurial Development**

Five items derived from the Entrepreneurial Development Scale were used to assess entrepreneurial development (Li, 2020).

### **3.6.4 Business Startups**

When evaluating business startups, five questions were designed from the ground up (Li, 2020). According to the questions, respondents were asked to rate their degree of agreement or disagreement with the topics listed in the appendix column using a five-point Likert scale. The scale ranged from 1 to 5, with 1 indicating serious disagreement and 5 expressing strong agreement on the problems.

### **3.6.5 Social Capital**

The social capital scale employed by Kritsotakis et al. (2008) was used (see appendix table). Respondents were asked to rate their degree of agreement or disagreement with the statements made in the table using a five-point Likert scale (1–5).

### **3.6.6 Government Regulations**

The poll yielded five questions that assessed government oversight (Scott, 2020). See appendix table. Respondents were asked to rate their degree of agreement or disagreement with the statements made in the table using a five-point Likert scale (1–5).

### **3.6.7 Questionnaire Pre-testing**

The questionnaire was pilot tested by selecting a few experts; all the issues detected in the questionnaire were resolved before the actual data collection procedure. The questionnaire was divided into different sections. The first section collected personal information from the respondents, such as age, gender, experience, and education. In the next sections, the questions related to all the measurement items associated with the various constructs of the study: services of business incubators, entrepreneurial finance, entrepreneurial development, business startups, EO, government regulations, and social capital. The questionnaire was sent to the selected respondents through the mail instead of it being filled in face to face.

Statistical analysis was applied to the collected quantitative primary data from the respondents. SPSS and SmartPLS were the major tools used for descriptive statistical analysis and convergent and discriminant validity, confirmatory factor analysis, and finally SEM. By using these tests, the objective of the research was fulfilled: to investigate the effect of services of business incubators and entrepreneurial finance on entrepreneurial development along with the mediating role of business startups and EO and the moderating role of government regulations and social capital, especially in the context of Pakistan.

### **3.7 Information on demographics**

Participants were asked about their personal backgrounds as well as the background of the business. The participants were asked to provide their tenure, gender, age, race, position and education for the first account. their tenure, gender, age, race, and education. They were questioned to provide information about their business, including its location, tenure, number of employees, ownership structure, and industry.

### **3.8 Statistical Data Analysis Methods**

This study used SPSS for the initial screening and for the advance analysis PLS-SEM used. SPSS had been used to evaluate data to support the sample's characteristics (Joseph F Hair et al., 2011). Bootstrapping was used to investigate the assumed relationships in the study's design (Joseph F Hair, Hult, Ringle, & Sarstedt, 2014; Wong, 2013).

### 3.8.1 PLS-SEM

A PLS path model is described by (Joseph F Hair, Hult, et al., 2014), which have two main steps first one is to assess the model and second is to test the hypothesis. The link between the construct as well as its indicators is described using the construct measurement model (rectangles). The reflecting indicators, according to (Joseph F Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014), reflected elements can be swapped out, are strongly interconnected, and can be removed without affecting the construct's meaning. As a consequence of this, shifts in the research instruments mirror changes to the underlying hidden structures. Loadings, also known as bivariate correlations, are used to link receiving special to a concept. These correlations take place between the symptom and the construct. The formative model, on the other hand, indicates a causal (predictive) relationship between the indicators and the construct by showing arrows going in a certain direction from the indicators to the construct. When you remove an item, you are also removing a portion of the construct. Changes in the indicators may arise as a result has an impact on the underlying construct's character. It is therefore critical to understand how the terms reflecting and formative, as well as the implications of the classification of “causal” and “effect,” show the differences between the two measurement models of the constructs (Jarvis, MacKenzie, & Podsakoff, 2003). According to Diamantopoulos & Winklhofer (2001), The selection of the preferable technique is supported by theoretical model on the order of causal precedence between the symptoms and the latent construct.

The structural model depicts the connections (path) that exist between constructs (circle or ovals). In the structural model, PLS-SEM only allows recursive interactions (e.g., no causal loops). As a direct consequence of this, the topological paths that connect the latent constructs can only be travelled in one direction. Two different kinds of constructs may be found in the conceptual framework: incidental and domestic. Exogenous variables are latent variables with only arrows pointing out of them and no structural route relationships pointing at them. Meanwhile, the term “endogenous” refers to a dependent variable in a structural model that indicates latent target constructs that are represented by other constructs via structural model relationships (Joseph F Hair, Hult, et al., 2014; Joseph F Hair, Sarstedt, et al., 2014).

The PLS-SEM considered to be a non approach that does not presume anything about the distribution function. As a result, non-normality and outlier assumptions have no bearing on this technique, which means there is no need to test the data's normality distribution. Despite this, the SmartPLS application is extremely sensitive to missing information. As a result, it is critical to deal with missing values before analyzing the model. The assessment (Sem) approach was used in order to examine and address the data that were lacking. To deal with missing data, EM is a useful technique that is widely used in data analysis. It contributes to everyone else in the analysis becoming more accurate, which in turn makes it possible for more trustworthy conclusions to be drawn from the data (Coakes, 2013). The researcher used SPSS to implement EM by selecting "missing value analysis" from the "examine" option. According to (Chin, 1998; Henseler et al., 2009), PLS involves two stages: (i) the assessment of the measurement model's reliability and validity, and (ii) the assessment of the structural model, as stated below.

### **3.8.2 Measurement Model to the Test (Outer Model)**

When analyzing the measurement model, it is necessary to consider the validity and reliability of the data (items). Individual parts of the measurement model are assessed in the context of particular quality criteria, such as reflective measurement models and participatory measurement models, while the measurement model is being evaluated as a whole. According to (Hair, Hult, et al., 2014), researchers must evaluate both the reliability and the validity of the reflecting measurement model. The first step is to investigate the construct's internal consistency and reliability using composite reliability (CR), which was previously tested using Cronbach's alpha. The second step is to examine the construct's external consistency and reliability using CR. The CR values reflect how often the construct parts correspond to the same latent construct as the construct components. When it comes to CR, the examination of construct reliability, which is related to an evaluation of the concept's internal consistency, is generally the primary emphasis.

The CR step is more suited to the PLS route model than Cronbach's alpha, which is a more traditional reliability measure. The reason for this is because CR is concerned with the estimated model's individual indicator dependability, which is based on the assumption that all indicators have distinct loadings on them (Hair, Sarstedt, et al., 2014; Henseler et al., 2009). However, Cronbach's alpha is a measure of dependability that is calculated based on the inter-correlation of

all indicators in the construct, with the assumption that each indicator has the same amount of loading. Furthermore, Cronbach's alpha is sensitive to the amount of items in the construct and has been shown to underestimate the reliability of latent construct internal consistency (Hair, Hult, et al., 2014). In order to overcome the restriction of Cronbach's alpha, CR values in the PLS-SEM model give a better estimate of the variance shared by the various indicators (Hair, Hult, et al., 2014; Hair, Sarstedt, et al., 2014).

The second phase in the assessment process is to determine the validity of reflective indicators. Validity may be classified into two types: convergent validity and discriminant validity. It is referred to as convergent validity when the consensus of the numerous items employed in the study measures the same idea to a greater or lesser level. The items should, in principle, be connected to one another in terms of their content. It is determined whether or not the indicators have convergent validity by looking at their outer loadings and the average variance extracted (AVE). The cutoff values for outside loadings should be more than 0.5, according to recommendations (Hair, Hult, et al., 2014). This procedure should be examined to see if removing all loadings between 0.4 and 0.7 increases the AVE or the CR over the acceptable level. It is necessary to clear the scale of any indications with loadings smaller than 0.4. (Hult and colleagues 2014; Joseph F. Hair and colleagues 2011; Hair et al. 2014; Hair and colleagues 2011).

The grand mean value of the squared loadings of a group of variables is said to be equivalent to the connectedness of a structure, in accordance with the idea of social solidarity (Hair, Sarstedt, et al., 2014). In the words of AVE, "the extent to which a latent concept explains the variation of its parts" is a measure of (Hair, Hult, et al., 2014). The latent constructs can, on average, describe more than half of something like the indications when the AVE value is greater than 0.5 (Hair et al., 2011; Henseler et al., 2009). When the AVE value is less than 0.5, the construct describes less variance in the items that are still (inadvertently) unclarified on average (Joseph F Hair et al., 2011). In cases when the outer loadings of each item are larger than 0.5 and the average value of each construct is equal to or greater than 0.5, convergent validity is established.

Discriminant validity analyzes the degree to which a concept is totally separate from other constructs in terms of how much it is connected to other constructs as well as how much indications indicate just a single construct (Joseph F Hair, Hult, et al., 2014). In this case, it means that the

construct measures what it is intended to measure. It is considered unique from other latent constructs if its square root of AVE is larger than the sum of its correlations with all other latent constructs. A distinction between the discriminant validity of the ideas may be established by one of two methods: cross-loading indicators and Fornell–Larcker criteria (Joseph F Hair, Hult, et al., 2014). Cross-loading is explored at the indicator level, while Fornell-Larcker criteria is researched at the concept level. This is the primary difference between the two techniques.

According to the cross-loadings technique, the AVE of each indication on its own construction should be greater than the cross-loadings of other constructions on the same build. The development of a discriminant validity issue is possible if the cross-loadings of other constructs are greater than the outer loading of the indicators. Using the Fornell–Larcker criteria to determine discriminant validity is the second way to assess discriminant validity. If objects meet the Fornell–Larcker criterion, they should load more heavily in their own constructs than they load in any other constructs in the study (Fornell & Larcker, 1981). In other words, the concept has a greater association with the indications than any other construct. If this requirement is satisfied, the mathematical expression of the AVE values is compared with the latent variable connections to determine whether or not the criteria were met. Each component of the construct should have a square root that is greater than the square root of the greatest correlation with any other construct in the construct. The reflective scale's statistical evaluation criteria, on the other hand, cannot be simply transposed to the formative scale to examine the model's reliability and validity. The indicators that create the latent variable are referred to as formative constructs, and they cannot be traded because they are not always correlated. In addition, formative indicators are considered to be error-free (Edwards & Bagozzi, 2000). The reporting of indicator reliability, reliability and validity, and discriminant validity are no longer necessary as a consequence of this. As a result, this is the case when dealing with a latent variable with uncorrelated measures since outer loading, convergent validity and discriminant validity, and the coefficient of determination of the AVE are all inappropriate. For example, formative indices are assessed more on the basis of the foregoing considerations and expert judgment on the causal connection between indicators and the latent concept than they are on the basis of empirical considerations (Diamantopoulos & Winklhofer, 2001).

PLS-SEM, on the other hand, proposes a set of statistical criteria for assessing the quality of formative measurement. In this regard, there are three procedures to evaluate formative measures: (a) weight significant test, (b) collinearity test, and (c) examination of the indicators' correlation with the latent construct. To begin, the significance of the weights is determined by calculating the significance of path coefficients using a bootstrapping technique. In PLS-SEM, the corresponding coefficients for the formative associations are referred to as outer weight (Joseph F Hair, Hult, et al., 2014). Collinearity between indicators is thought to be a fundamental challenge in validating formative measurements. The variance inflation factor is calculated to analyze collinearity, and the analysis is carried out in SPSS. Finally, the indicators' correlation with the latent construct is investigated to determine their absolute contribution.

### **3.8.3 Evaluation of the Structural Model (Inner Model)**

After the outer model's reliability and validity have been established, additional procedures must be taken to evaluate the hypothesized links within the inner model (structural model). The structural model is evaluated by examining the link between latent constructs and other latent constructs, which is followed by hypothesis testing. The structural model is evaluated using the PLS-SEM technique and bootstrapping (Chin, 2010). In order to analyze the structural model of PLS, the following criteria were used: the coefficient of determination ( $R^2$ ), the effect size ( $f^2$ ), the importance of coefficient of determination, and predictive relevance ( $Q^2$ ).

First and foremost,  $R^2$  is related to the predictive power of the structural model's endogenous latent construct. It determines the accuracy of the prediction model. It represents the combined influence of external and endogenous constructions on the endogenous construct or constructs in question (Chin, 2010; Hair et al., 2014; Henseler et al., 2009).  $R^2$  denotes the proportion of the variation in the endogenous that can be explained by the exogenous variables. High predictive accuracy should be achieved at the key goal structure level of  $R^2$ , which ranges from 0 to 1, with 1 indicating total predictive accuracy (Joseph F Hair, Hult, et al., 2014). According to Cohen,  $R^2$  values of 0.26, 0.13, or 0.02 may be used as a general guide to suggest strong, moderate, and poor predictive accuracy, respectively, in a given situation (1992, 2013). For endogenous latent constructs,  $R^2$  values of 0.75, 0.50, or 0.25 are considered considerable, medium, and weak, respectively, by researchers. (Chin, 2010).

Second, Cohen's impact size ( $f^2$ ) may be utilized to assess predictor constructs (Cohen, 2013).  $f^2$  refers to the alteration of endogenous latent structures by foreign latent constructs through  $R^2$  (Chin, 2010). By removing particular constructs from the model,  $R^2$  modifications may be utilized to compute  $f^2$ . To find  $f^2$ , a researcher needs estimate two PLS path models. The whole model described in the hypotheses,  $R^2$ , is the first path model ( $R^2$  included). Similar to the first route model, but with one exogenous component removed, namely  $R^2$  of the simplified model ( $R^2$  excluded). Based on the value of  $f^2$ , the effect size of the deleted constructions on a single endogenous build may be computed as 0.02, 0.15, and 0.35 (Cohen, 2013). Thus, if an external construct provides a major contribution to understanding the estimate, the difference between  $R^2$  incorporated and  $R^2$  excluded will be much higher than the difference between  $R^2$  excluded and  $R^2$ . The following is the formula for determining the magnitude of the effect:

$$f^2 = \frac{R^2_{\text{included}} - R^2_{\text{excluded}}}{1 - R^2_{\text{included}}}$$

It is also possible to determine how important the route coefficients are by examining the structural model using another method. Because PLS-SEM makes no assumptions about the normal distribution, the researcher must utilize the bootstrapping method to evaluate the model's degree of significance. A bootstrapping strategy should be employed in order to prevent the  $t$ -value being inflated or deflated, which might result in a type 1 error if the data are not normally distributed. "Bootstrapping" is a resampling technique in which an extremely large number of sub-samples of the original data are obtained (with replacement) and the framework is estimated for each sub-sample. This results in a large sample data of the estimated model (usually 5,000 or more), which the researcher may use to calculate the standard error (SE) for each model parameter using the SE of the estimated model. The SE may be used to assess the importance of each parameter, and the  $t$ -value is used to establish its significance. As part of this investigation, a statistically significant number of sub-samples (e.g., 500) were taken from the original sample and substituted with new ones to create bootstrap SE, which supplied approximate  $t$ -values for structural route significance testing. According to (Chin, 1998), the usual suggestion for utilizing bootstrapping to estimate a parameter is 500 resamples per parameter.

Bootstrapping yields results that are similar to the typical data. The variance explained is also emphasized in PLS-SEM analysis to determine the significance of all path estimations (Joseph F Hair, Sarstedt, et al., 2014). Examining Stone–Geisser's  $Q^2$  value is the fourth criterion for

evaluating the structural model. The  $Q^2$  is a way to evaluate the structural model's predictive usefulness (Chin, 2010; Joseph F Hair, Sarstedt, et al., 2014; Henseler et al., 2009).

The predictive relevance hypothesis states that the model must be able to predict the data points of indicators for each endogenous latent construct. The blindfolding process is offered as a way to test the predictive significance. Blindfolding is an approach for sample reuse in which each  $d$ th piece of information in the autonomous construct's indications is removed, and then the remaining data points are used to estimation of the parameters. according to (Joseph F Hair, Hult, et al., 2014). When using the PLS-SEM technique, the deleted data points assume that missing values have been processed appropriately. The findings of such estimations are then utilized to anticipate the data points that have been deleted. The genuine (eliminated) data points differ from the projected data points in that the latter is used as an input to calculate  $Q^2$ . Typically, the omission distance, " $d$ " of 5-10 in PLS, is used to estimate  $Q^2$  (Chin, 2010). The structural model has predictive ability for this particular construct if the value of  $Q^2$  for all endogenous latent components is greater than zero (Joseph F Hair, Hult, et al., 2014; Joseph F Hair, Sarstedt, et al., 2014). The blindfolding process is only useful for endogenous latent variables that retain the specification of a reflective measurement model (Joseph F Hair, Hult, et al., 2014). As a result, the model's quality is determined by its ability to forecast endogenous constructs (Joseph F Hair, Sarstedt, et al., 2014). The essential criteria for evaluating the structural model are shown in above table. The next section discusses all the tests that were used to test the study's hypotheses.

### **3.8.4 Direct Effect Testing**

Direct evaluation of hypothesis testing is not acceptable in this study because it calls for the measurement of both reflective and formative components in nearly the same framework, as well as the application of a hierarchical component model that is reflective and formative in nature (reflective–formative kind) (Joseph F Hair, Hult, et al., 2014). Because of the usage of the repeated indicators technique, practically all of the variations of the higher order component can be explained by the lower order component of the higher order component ( $R^2$  values almost 1.0).

### 3.8.5 Indirect Effect

The importance of the link between variables must be analyzed in order to examine the mediating influence. "Mediation" is a specific case of "indirect effect," according to (Preacher & Hayes, 2004). "When evaluating mediating effect, researchers should rather follow (Preacher & Hayes, 2004, 2008) and bootstrap the sampling distribution of the indirect impact, which works for simple and multiple mediator models" (Joseph F Hair, Hult, et al., 2014). Because SEM can examine the link of multiple variables simultaneously, it is a better method than the "causal procedure" popularized by (Baron & Kenny, 1986). (Joseph F Hair et al., 2012; Preacher & Hayes, 2008). Due to low power and several steps in the technique, (Baron & Kenny, 1986) procedure has gotten a lot of criticism, as it concludes that there is mediation when there is not (Hayes, 2009; Preacher & Hayes, 2004, 2008). Furthermore, some researchers have argued that mediation does not require a considerable total influence of a predictor variable on the criterion variable (measured as  $c$ ) (Preacher & Hayes, 2008; Shrout & Bolger, 2002). In the absence of a total effect, failing to assess indirect effects may cause us to ignore certain potentially significant, valuable, or intriguing pathways through which predictor factors may have an impact on criterion variables (Hayes, 2009). Preacher and Hayes (2004) claimed that, although the parameters of the model "a" and "b" are frequently distributed, the outcome of the equation " $a*b$ " is not regularly distributed. It is not recommended to utilize the Sobel test online since its results are based on normal distribution, and the indirect influence is not normally distributed, resulting in erroneous findings. SE may be impacted as a result of this. Consequently, the bootstrapping method should be utilized to correct the situation. The bootstrapping test was used to investigate the mediating effect for SEM using a new method developed by (Hayes, 2009) and (Preacher & Hayes, 2004, 2008) dubbed "modularizing the indirect impact." The bootstrapping test was used to investigate the mediating effect for SEM. Bootstrapping is a non-parametric resampling technique that has been hailed as one of the most rigorous and reliable methods of determining the mediating effect (Shrout & Bolger, 2002; Zhao, Lynch Jr, & Chen, 2010). Moreover, this approach is particularly suited for PLS-SEM since it makes no assumptions about the shape of the variable distribution or the statistical sampling, and, as a result, it may be used with small samples (Joseph F Hair, Hult, et al., 2014; Preacher & Hayes, 2008). According to (Hayes, 2009), there are many approaches that may be used to investigate mediating effects. To assess mediation, first construct a model using SEM

to estimate the relationship between the predictors and the mediator variable (path "a"), as well as the link between the mediator and the criteria variables (path "b"). When the direct relationships are statistically significant, the bootstrapping method is utilized to acquire the  $t$ -values required for evaluating them, and the mediation test is advised in these cases. A second step is carried out when the bootstrapping process is done, resulting in the creation of 500 bootstrap sample direct effects, which are represented by paths "a" and "b." Because the indirect effects (i.e., the path coefficients for "a\*b") must be determined manually, the bootstrapping indirect effects for all intervention hypotheses are generated by multiplying the product of each indirect path by the number of indirect paths in total. The third step is to calculate the SEs for all indirect effects. Because the data in SmartPLS has already been standardized, the SE is calculated using the Excel spreadsheet function "STDEV." The SE is then used to generate the  $t$ -values for all indirect effects, which are then summarized. The  $t$ -value is derived with the help of the formula shown below.

$t = \text{the indirect effect/SE}$

$t = a*b/SE$

Fourth, the 95% bootstrapped confidence interval (95% Boot CI) for all indirect effects is generated using the following formula to further confirm the mediation effects:

The lower limit (LL) is equal to  $a*b - Z \cdot (SE)$

The upper limit (UL) is defined as  $a*b + Z \cdot (SE)$

(For the 0.05 level, the Z value is 1.96)

The importance of the link between variables must be analyzed in order to examine the mediating influence. "Mediation" is a specific case of "indirect effect," according to (Preacher & Hayes, 2004). "When evaluating mediating effect, researchers should rather follow (Preacher & Hayes, 2004, 2008) and bootstrap the sampling distribution of the indirect impact, which works for simple and multiple mediator models," say (Joseph F Hair, Hult, et al., 2014). Because SEM can examine the link of multiple variables simultaneously, it is a better method than the "causal importance of the link between variables must be analyzed in order to examine the mediating influence.

### **3.8.6 Testing the Moderating Effect**

In the field of psychology, moderating effects are variables that have the ability to influence the strength or direction of a link between an exogenous and an endogenous latent concept (i.e., simple effect). As the name implies, a moderator variable is a third variable that influences the connection between two independent variables. It is also known as the contingent variable. When modelling moderator variables in PLS-SEM, researchers must add an interaction term to account for the link between the exogenous latent variable and the moderator variable. Moderation, in contrast to mediation, focuses on the change in  $R^2$  when interaction terms are introduced to assess the impact of interaction terms on the outcome. There are two well-known concepts to consider while modeling the interaction term. The two-stage method and the product indicator approach are the approaches in question. Because this research contained both reflective and formative data in the same model, the two-stage technique was used to investigate the moderating effects (Joseph F Hair, Hult, et al., 2014).

## **Chapter Four**

### **Results and Findings**

#### **Introduction**

The results of the statistical data analysis are presented in this chapter, which is divided into four sections. The results of the descriptive statistics of the incubation centers' CEOs' profiles and the characteristics of the respondents come first. Finally, the hypothesis testing findings as well as the model's predictive usefulness are provided.

#### **4.1 Response Rate**

A total of 531 questionnaires were issued to the CEOs of Pakistan's educational business incubators centers. All of the CEOs who were chosen expressed an interest in participating in the survey. The response rate of the sampled CEOs is shown in Only 392 of the 531 questionnaires sent out were returned. Despite this, 11 cases were left out, five of which were incomplete and six of which were answered by irrelevant persons.

As a result, only 381 questionnaires were used for data analysis, representing a legitimate response rate of 60.5%. This response rate was achieved only after a great deal of effort and hard work. In comparison to other research, the response rate was very high due to the use of a self-administered questionnaire (Ahmed, Hassan, & Taha, 2004; Farouk, Elanain, Obeidat, & Al-Nahyan, 2016; Osman, CF, & Galang, 2011; Sohail & Hoong, 2003; Zakaria, Zainal, & Nasurdin, 2011).

The sample size of 381 was deemed sufficient in PLS to achieve an acceptable degree of statistical power. Furthermore, the sample size of this study followed (Roscoe, Lang, & Sheth, 1975) rule of thumb, which indicated that the ideal sample size for most studies is supposed to be greater than 30 but less than 500, as noted in (Sekaran & Bougie, 2003). The sample size in this investigation satisfied the requirements of G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007), which were addressed in the preceding chapter, in addition to the "10 times" rule of thumb.

After data collection, the data were immediately processed using the SPSS 20 statistical package. To begin, the missing data were examined and addressed using the maximum likelihood estimation (MLE) approach. MLE is a tool that increases the overall accuracy of an analysis, allowing for more accurate conclusions to be drawn from the data as a result of the analysis (Coakes, 2013). In order to compute missing values, the probability of parameter estimations was used.

#### 4.1.1 Respondents' Profiles

The demographic profile of the respondents (i.e., CEOs) is indicated in Table 3.

**Table 3: University incubation centers, CEO profiles**

<b>Demographic Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	330	86.6%
Female	51	13.4%
<b>Age Group</b>		
Up to 25	134	35.2%
26–45	198	52.0%
46–55	30	7.9%
56+	19	5.0%
<b>Education</b>		
Bachelors	273	71.7%
Masters	98	25.7%
M Phil	10	2.6%
<b>Nature of Business</b>		
Services	147	38.6%
Manufacturer	234	61.4%
<b>Business span</b>		
Less than 2 Year	175	45.9%
2 to 4 Year	135	35.4%
4 and above	71	18.6%

Table 3 depicts the demographic profile of the majority of CEOs who taken the university incubation services. Out of all the respondents, 330 (86.6%) were male and 51 (13.4%) were female. In terms of age, 134 (35.2%) respondents were up to 25-years old, 198 (52.0) were within the age range of 26 to 45-years old, 30 (7.9%) were in the age range of 46 to 55, and 19 (5%) were

56-years old or older. For qualifications, 273 respondents 71.7 % bachelor's degree, 98 (25.7%) respondents are masters, and 10 respondents 2.6 % possessed an M Phil degree. In addition, 147 (38.5%) respondents were from the services sector and 234 (61.6%) were from the manufacturing sectors of incubation centers.

## 4.2 Measurement Model Evaluation

**Table 4: Validity and reliability**

<b>1st Order Construct</b>	<b>2nd Order Construct</b>	<b>Items</b>	<b>Loading</b>	<b>CR</b>	<b>AVE</b>
	Training Program	TP1	0.725	0.899	0.533
		TP2	0.718		
		TP3	0.489		
		TP4	0.658		
		TP5	0.719		
		TP6	0.814		
		TP7	0.798		
	Business Advice	BA1	0.663	0.902	0.507
		BA2	0.74		
		BA3	0.676		
		BA4	0.726		
		BA5	0.643		
		BA6	0.644		
		BA7	0.72		
		BA8	0.766		
		BA9	0.809		
	Network Services	NS1	0.509	0.86	0.515
		NS2	0.554		
		NS3	0.821		
		NS4	0.839		
		NS5	0.838		
		NS6	0.668		
	Technological Support	TS1	0.686	0.918	0.504
		TS2	0.749		
		TS3	0.738		
		TS4	0.765		
		TS5	0.73		
		TS6	0.754		
		TS7	0.681		
		TS8	0.649		
		TS9	0.668		
		TS10	0.662		
			0.839		

1st Order Construct	2nd Order Construct	Items	Loading	CR	AVE
Entrepreneurial Finance		EF1		0.912	0.674
		EF2	0.869		
		EF3	0.831		
		EF4	0.853		
		EF5	0.703		
Business Startups		BS1	0.843	0.886	0.612
		BS2	0.804		
		BS3	0.844		
		BS4	0.631		
		BS5	0.769		
Entrepreneurial Orientation		EO2	0.763	0.764	0.593
		EO3	0.739		
		EO4	0.727		
		EO7	0.826		
		EO8	0.746		
Social Capital		EO9	0.814		
		SC1	0.831	0.921	0.701
		SC2	0.834		
		SC3	0.838		
		SC4	0.854		
Government Regulations		SC5	0.83		
		GR1	0.735	0.735	0.651
		GR2	0.866		
		GR3	0.727		
		GR4	0.898		
Entrepreneurial Development		GR5	0.793		
		ED1	0.788	0.789	0.63
		ED2	0.859		
		ED3	0.808		
		ED4	0.798		
		ED5	0.708		

Individual item/construct dependability is examined in PLS by analyzing item loadings on their associated latent constructs (Hulland, 1999). The greater the loadings, the more variation is shared between construct and measurement rather than an error variance, but the lower the loadings, the lower the power of model explanation, which minimizes the parameter estimates linking the constructs (Hulland, 1999). The indicators in the reflective measurement framework are closely related and interchangeable, thus their reliability and validity must be thoroughly examined and reported. As a result, the researcher double-checked the measurement model's reliability and validity. CR was used to assess reliability, and convergent and discriminant validity were used to

assess validity. Internal consistency (e.g., CR), convergent validity (e.g., AVE), and discriminant validity as heterotrait-monotrait ratio of correlations (HTMT). This was done to ensure that the specifications were met and dependable before evaluating the structural model's links.

### **4.3 Composite Reliability**

CR was computed to analyze the construct's internal reliability. All items' loadings for reflective structures were evaluated to see if they exceeded a cutoff value of 0.5, as proposed by (Joseph F Hair, Hult, et al., 2014). All elements were loaded on their corresponding construction items, as shown in Table 4.3.1. All of the item loadings were higher than the recommended threshold of 0.5. The loadings varied from 0.509 to 0.951, which indicates that the constructions contributed for yet more than half of the variation in the independent variables. The observed variable had a range of values. Items that had lateral loads of less than 0.5 were deleted one by one in order to bring the construct's internal reliability up to a high threshold value. As long as the reflecting scale retains the required level of internal consistency, the elimination of some items from the scale may or may not have an impact on the relationships between concepts of the construct. This is due to the fact that the causation runs from construct to things, indicating that the items reflect the effects.

The objects have a strong relationship with one another since they are both influenced by the same fundamental concept (Joseph F Hair, Hult, et al., 2014; MacKenzie, Podsakoff, & Jarvis, 2005). After the elements were removed from the scale, the internal consistency of all the constructions was found to be within an acceptable range in this investigation. Ten reflecting latent components had CR values ranging from 0.735 to 0.921, which were higher than the recommended cutoff value of 0.7. (Joseph F Hair, Anderson, Babin, & Black, 2010). As a result, all structures had a high level of internal consistency.

### **4.4 Convergent Validity**

The AVE was used to determine convergent validity. Table 4 shows convergent validity, which demonstrated that all latent constructs' AVE values were greater than the acceptable threshold of 0.5, with values ranging between 0.504 and 0.701. The latent concept explained more than half of the variation of its indicators if the AVE value was more than 0.5. The results of the measurement

model are summarized in Table 4. Based on parameter estimates and statistical significance, all seven main constructs, namely services of business incubation centers, entrepreneurial finance, business startups, EO, social capital, government regulations, and entrepreneurial development, were found to be valid measures of their respective constructs (Chow & Chan, 2008). As a result, the model constructs exhibited enough convergent validity.

#### **4.5 Discriminant validity**

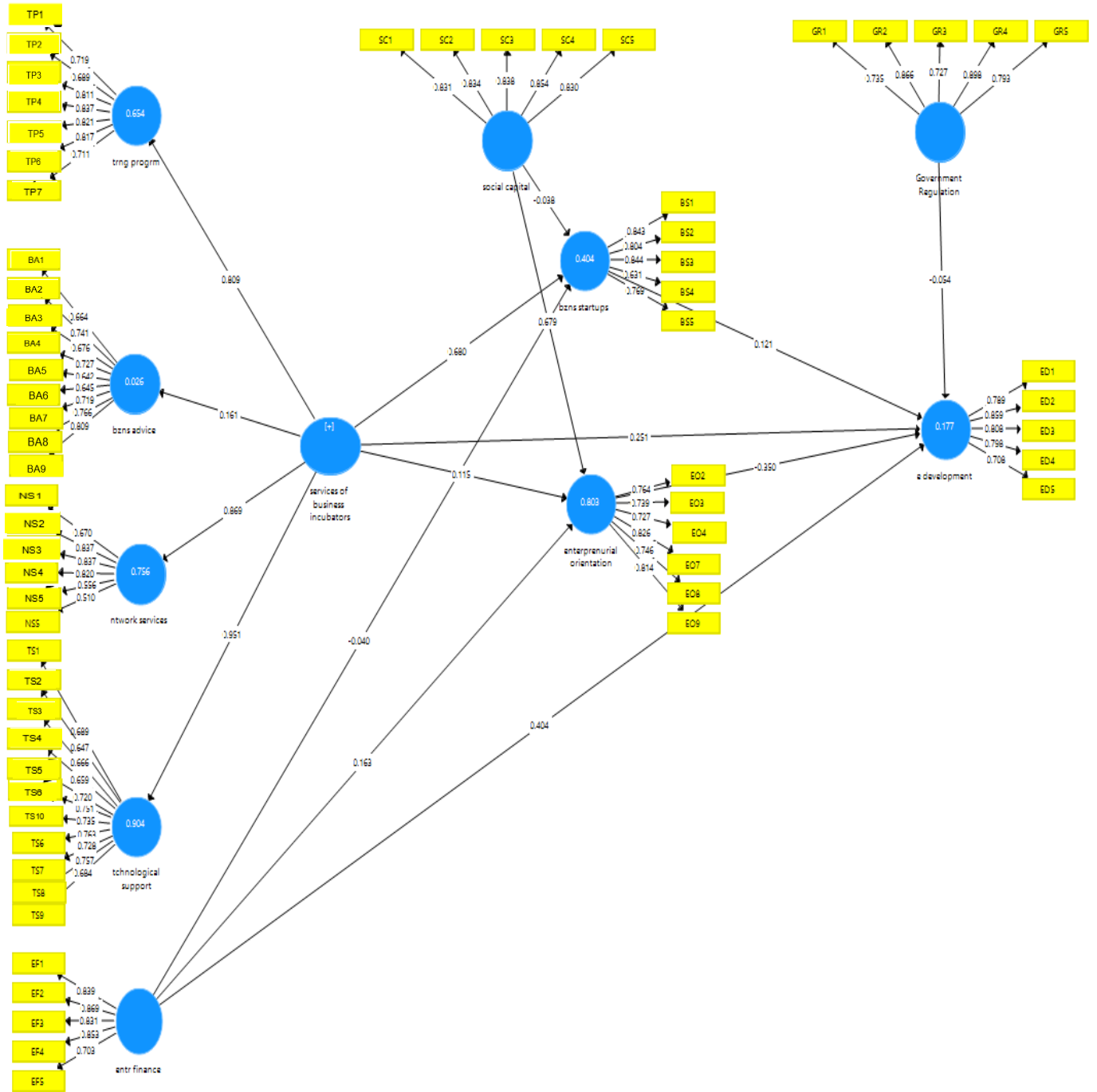
Henseler et al. (2014) published a paper that provided a new criterion for evaluating discriminant validity in variance-based SEM. They agreed that the Fornell–Larcker criteria and cross-loadings are the most used methods for determining discriminant validity in variance-based structural equation models. Furthermore, they claimed that these methods have failed to discover the lack of discriminant validity in a variety of research circumstances. As a result, (Henseler et al., 2014) presented an alternative methodology to measure discriminant validity called HTMT, which is based on the "HTMT." Several studies have utilized the HTMT ratio to examine discriminant validity and have advised that this method be used to assess discriminant validity (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Haider, Jabeen, & Ahmad, 2018; Hamid, Baharun, & Hashim, 2006; Hussein & Baharudin, 2017; Janadari, Sri Ramalu, & Wei, 2016).

The HTMT ratio (table 5) can be used in two ways to assess discriminant validity: the first is as a criterion and the second is as a statistical test (Henseler et al., 2014). The HTMT ratio in the first approach should be less than 0.85 (Kline, 2011; Watson et al., 1995) or less than 0.90. (Gold, Malhotra, & Segars, 2001). When the HTMT ratio is higher than the criteria that were discussed before, discriminant validity becomes a worry. The second step is to determine whether or not the alternatives hypotheses ( $H_1: HTMT < 1$ ) is more likely to be true than the positive claim ( $H_0: HTMT < 1$ ). If the significance level contains the value one, then suggests that composite reliability is not present (Henseler et al., 2014). The HTMT ratio was employed in this study to test discriminating validity utilizing the first criterion technique.

**Table 5: HTMT ratio**

<b>2<sup>nd</sup> Order</b>	<b>Government Regulations</b>	<b>Business Startups</b>	<b>Entrepreneurial Development</b>	<b>Entrepreneurial Orientation</b>	<b>Entrepreneurial Finance</b>	<b>Services of Business Incubators</b>	<b>Social Capital</b>
<b>Government Regulations</b>							
<b>Business Startups</b>	0.467						
<b>Entrepreneurial Development</b>	0.138	0.309					
<b>Entrepreneurial Orientation</b>	0.473	0.423	0.176				
<b>Entrepreneurial Finance</b>	0.435	0.405	0.29	0.612			
<b>Services of Business Incubators</b>	0.562	0.664	0.448	0.663	0.655		
<b>Social Capital</b>	0.425	0.376	0.189	0.397	0.452	0.629	

**Figure 3: Assessment model**



## 4.6 The Approach to Direct Relationships

Non-significant or displaying signals in the opposite direction of the hypothesis do not support prior hypotheses, according to (Joseph F Hair, Hult, et al., 2014), whereas significant paths empirically corroborate the claimed causal relationship. Before testing the mediating impact, the *t*-value was calculated using bootstrapping with a resample of 500 to see if the direct associations were significant. Figure 7 shows how the path coefficients were generated. The bootstrapping results are shown in Figure 4.6 and Table 7. The following are the detailed results.

**Table 6: Path analysis**

<i>Results of Direct Relationship</i>								
Hypothesis	Relationships	Beta	S D	T Stat	P Values	LL 5%	UL 95%	Decisions
			<b>c</b>					
<b>H1</b>	<b>SBI -&gt; BS</b>	0.678	0.043	15.71	0**	0.612	0.747	Supported
<b>H2</b>	<b>SBI -&gt; EO</b>	0.113	0.033	3.11	0**	0.06	0.158	Supported
<b>H3</b>	<b>SBI -&gt; ED</b>	0.281	0.094	3.94	0.001**	0.129	0.433	Supported Not
<b>H4</b>	<b>EF -&gt; BS</b>	-0.039	0.085	0.455	0.321	-0.173	0.095	Supported
<b>H5</b>	<b>EF -&gt; EO</b>	0.164	0.045	3.536	0**	0.088	0.239	Supported
<b>H6</b>	<b>EF -&gt; ED</b>	0.402	0.1	4.006	0**	0.231	0.553	Supported

Note: \* $p < 0.05$  ( $t > 1.645$ ); \*\* $p < 0.01$  ( $t > 2.33$ )

### Hypothesis 1: Services of Business Incubators are positively related to Business Startups

With bootstrapping PLS-SEM, the method discovered a significant connection between entrepreneurship development services and entrepreneurship ( $\beta=0.678$ ,  $t=15.71$ ,  $p<0.01$ ). Hypothesis 1 is therefore tested.

### Hypothesis 2: Services of business incubators have a significant impact on EO

The second hypothesis, that there is a positive and significant relationship between business incubator service and EO, was likewise confirmed ( $\beta = 0.113$ ,  $t = 3.11$ ,  $p = 0$ ). In the above result

both hypotheses are support to the study its mean SBI practically helpful to built the business startups and entrepreneurial orientation. Services of business incubator directly failed in entrepreneurial development. The main reason is that the entrepreneurial development needs some critical factors which help entrepreneurial development.

**Hypothesis 3: Services of business incubators have a significant impact on entrepreneurial development.**

A significant and favorable positive link exists between business incubator services and entrepreneurship development ( $\beta = 0.281, t = 3.94, 0.001 p < 0.01$ ). As a result, hypothesis number three is accepted.

**Hypothesis 4: Entrepreneurial finance has a significant impact on business startups**

Due to the  $t$ -value being below the limit of 1.645, there was no statistically significant link between entrepreneurial funding and company startups ( $-0.039, t = 0.455, p (0.05) = 0.321$ ). As a consequence, Hypothesis 4 was rejected. We cannot draw conclusions (Lane, 2011; Rainey, 2012).

**Hypothesis 5: Entrepreneurial finance has a significant impact on EO**

Entrepreneurial finance and EO have a constructive and significant association. Hypothesis 5 is confirmed as a result.

**Hypothesis 6: Entrepreneurial finance has a significant impact on entrepreneurial development.**

The algorithm's output and bootstrapping PLS-SEM found that business incubation services and business startups had a positive and significant connection. Hypothesis 6 is confirmed as a result ( $\beta = 0.402, t = 4.006, p < 0.01$ ).

As far as remaining direct effect are concerned mean, entrepreneurial finance has strong impact on business startups, entrepreneurial orientation. In context to Pakistan main motivation to start the business is finance.

**Table 7: Mediation analysis**

Hypothesis	Relationships	Beta	SD	T Stat	P		UL		Decision
					Values	LL 5%	95%		
<b>H7</b>	<b>SBI -&gt; BS -&gt;ED</b>	0.047	0.056	0.838	0.201	-0.042	0.137	Not Supported	
<b>H8</b>	<b>SBI -&gt; EO -&gt;ED</b>	-0.036	0.016	2.245	0.013	-0.065	-0.015	Supported	
<b>H9</b>	<b>EF -&gt; EO -&gt; ED</b>	-0.054	0.023	2.307	0.011	-0.094	-0.02	Supported	
<b>H10</b>	<b>EF -&gt;BS -&gt; ED</b>	-0.003	0.01	0.28	0.39	-0.022	0.007	Not Supported	

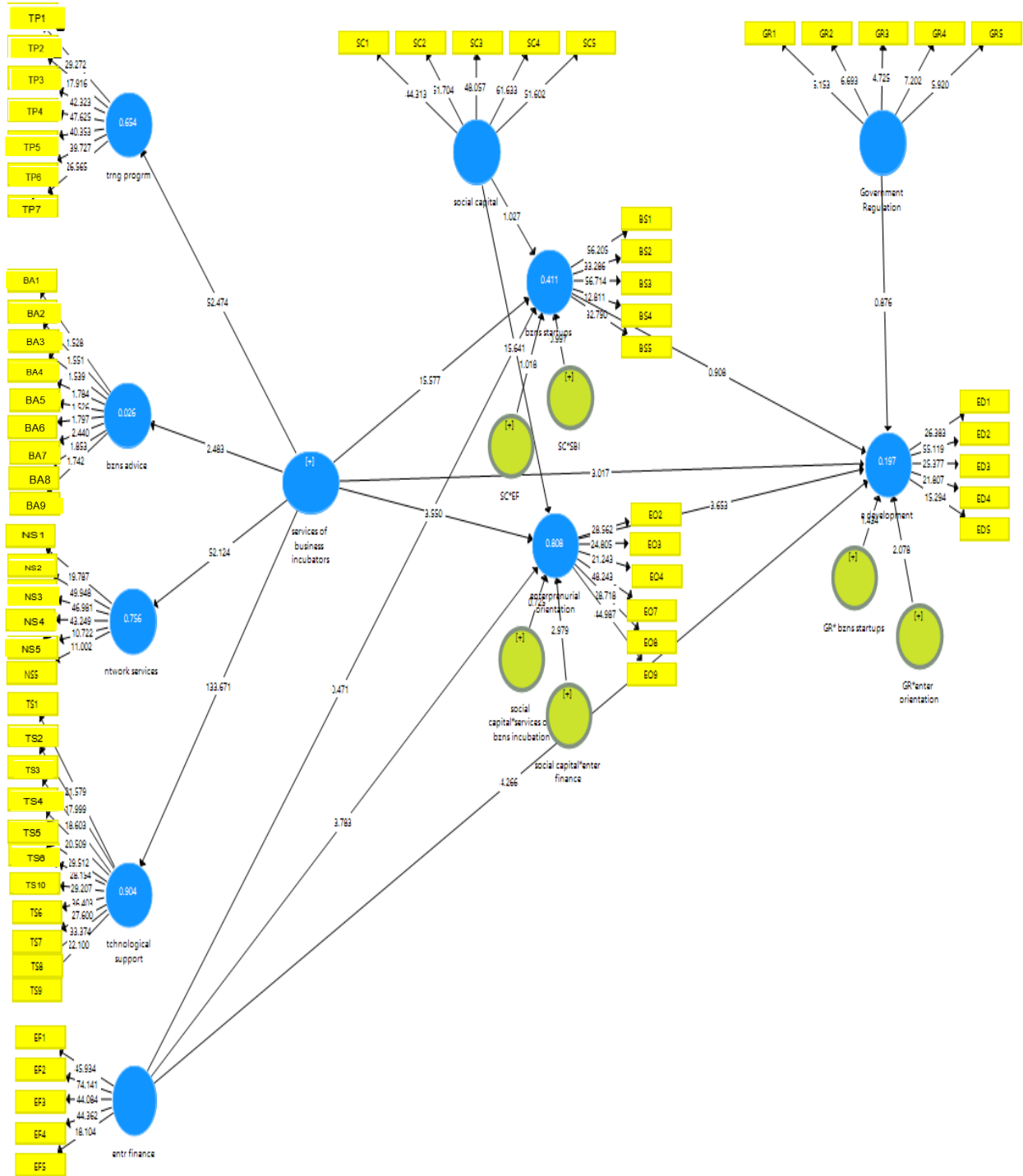
Note: SE – Standard Error; LL – Lower Limit; UL – Upper Limit

Table 8, indicates two meaningful correlations whereas the other two were not. After testing the associations, the mediation effect was investigated. It takes numerous steps to examine this link (Hayes, 2009). To identify mediation, a researcher must first construct a model using SEM to estimate the predictor–mediator link and the mediator–criterion relationship. Bootstrapping was used for this. A total of 500 bootstrapped direct impacts were analyzed. Second, a bootstrapping *t*-test was calculated to examine the mediation effect. Third, SEs were computed for all indirect effects. Table 8 reveals that only two of the four hypotheses given satisfied the threshold of establishing mediation due to strong indirect effects. To examine the importance of the mediating impact, (Henseler et al., 2009) presented a non-parametric bootstrapping strategy.

**Hypothesis 7: Business startups have a significant mediating role in the relationship between services of business incubators and entrepreneurial development.**

Hypothesis 7 produced a *t*-value of 0.838 less than the threshold value 1.96, suggesting an insignificant result. A mediation effect of business startups on the connection between entrepreneurial development services of business incubation was not supported, as shown in table 8. A 95% confidence interval (LL = -0.042, UL = 0.137) straddled the middle zero in Preacher and Hayes (2008). The main reason of rejection of this hypothesis is that the business incubator has lack of financial resources. As earlier said that there no direct link observed between but there is no mediating link found in the BS between SBI and ED and EF and ED. The reason is that mostly people do not know about the development skill even universities are start to educate the people toward entrepreneurship but still there is need to do a lot of work to understand the meaning of development.

**Figure 4: Measurement model**



Conclusions can be formed (Lane, 2011; Rainey, 2012). In addition, the power of investigation (G\*Power) surpassed 0.80, indicating that the negligible correlation is not due to methodological issues.

**Hypothesis 8: EO has a significant mediating role in the relationship between services of business incubators and entrepreneurial development**

The bootstrapping analysis revealed that the indirect effect ( $\beta = -0.036$ ) was significant with a  $t$ -value of 2.245, as shown in Table 8 and Figure 4. Preacher and Hayes (2008), the bootstrapping analysis revealed that the indirect effect ( $\beta = -0.036$ ) was significant with a  $t$ -value of 2.245, as shown in Table 8 and Figure 4. Preacher and Hayes (2008) also found that the indirect impact 95% Boot CI (LL = -0.065, UL = -0.015) did not straddle a 0 in the middle, indicating mediation. Thus, the mediation effect of EO on the association between services of business incubation and entrepreneurial development was statistically significant ( $\beta = -0.036$ ,  $t = 2.307$ ,  $p < 0.01$ ). As a result, Hypothesis 8 was accepted.

**Hypothesis 9: EO has a significant mediating role in the relationship between entrepreneurial finance and entrepreneurial development.**

The bootstrapping analysis revealed that the indirect effect ( $\beta = -0.054$ ) was significant with a  $t$ -value of 2.307, as shown in Table 8 and Figure 4. The indirect impact 95% Boot CI (LL = -0.94, UL = -0.02) did not straddle a 0 in between, indicating mediation, according to Preacher and Hayes (2008). As a result, EO had a significant mediation effect on the connection between entrepreneurial finance and entrepreneurial development. Hypothesis 9 was found to be true.

**Hypothesis 10: Business startups have a significant mediating role in the relationship between entrepreneurial finance and entrepreneurial development**

Hypothesis 10 revealed that the  $t$ -value of 0.28 was less than the cutoff value of 1.96, indicating that the outcome was inconsequential. As indicated in Table 8 and Figure 4, there was no convincing evidence of a mediation effect of business startups on the link between entrepreneurial financing and entrepreneurial development ( $\beta = -0.003$ ,  $t = 0.28$ ,  $p > 0.05$ ). The indirect effect 95% Boot CI (LL = -0.022, UL = 0.007) did straddle a 0 in between, indicating no mediation, according

to (Preacher & Hayes, 2008). As a result, H10 has been ruled out, and no conclusions can be formed (Lane, 2011). The relationship was declared insignificant since all of the relevant steps in the methods pertaining to selecting and confidence intervals had been taken into account, as well as the fact that the power of analysis (G\*Power) exceeded 0.80.

**Table 8: Moderation analysis**

Hypothesis	<i>Results of Indirect Relationship</i>				<b>(Moderation)</b>			Decision
	Relationships	Beta	SD	T Stat	<i>P</i> Values	LL 5%	UL 95%	
H11	SC*SBI -> BS	-0.047	0.047	1.005	0.158	-0.147	0.04	Not Supported
H12	SC*SBI -> EO	0.021	0.031	0.708	0.24	-0.027	0.072	Not Supported
H13	SC*EF -> BS	-0.056	0.056	1.007	0.157	-0.124	0.054	Not Supported
H14	SC*EF -> EO	-0.085	0.028	3.052	0.001	-0.132	-0.042	Supported
H15	GR*BS -> ED	-0.095	0.061	1.562	-0.091	-0.184	0.01	Not Supported
H16	GR*EO -> ED	0.144	0.064	2.268	0.012	0.045	0.25	Supported

**Hypothesis 11: Social capital has a significant moderating role in the relationship between services of business incubators and business startups.**

Hypothesis 11 – the association between business incubation services and business startups is moderated by social capital. This study used a two-stage strategy to investigate the moderating effect of social capital on the relationship between services of business incubators and business startups. The model's moderating impact test is shown in Table 9 and Figure 4. Hypothesis 9 demonstrated that the *t*-value 1.005 was less than the cutoff value of 1.645 in Table 9 and picture 4.6, indicating that the outcome was not statistically significant. As a result, there was no credible evidence of social capital's moderating influence on the link between business incubation services

and business startups ( $\beta = -0.047$ ,  $t = 0.047$ ,  $p > 0.05$ ). As a result, H11 was dismissed, and no conclusion could be formed (Lane, 2011; Rainey, 2012).

**Hypothesis 12: Social capital moderates the relationship between services of business incubators and EO.**

Hypothesis 12 demonstrated that the  $t$ -value, which was 0.708, was lower than the cutoff value, which was 1.645, suggesting that the result was not statistically significant. This was shown in both Table 9 and Figure 4. As a result, there was no convincing evidence of social capital's moderating influence on the link between services of business incubation and EO ( $\beta = 0.02$ ,  $t = 0.708$ ,  $p > 0.05$ ). As a result, H12 has thus been ruled out, and no inferences can be drawn (Lane, 2011; Rainey, 2012).

**Hypothesis 13: Social capital has a significant moderating role in the relationship between entrepreneurial finance and business startups.**

Hypothesis 13 demonstrated that the  $t$ -value 1.007 was less than the cutoff value of 1.645 in Table 9 and Figure 4, indicating that the outcome was not statistically significant. As a result, there was no trustworthy evidence of social capital's moderating influence on the link between business startups and entrepreneurial finance ( $\beta = -0.056$ ,  $t = 1.007$ ,  $p < 0.157$ ). As a result, H13 has been ruled out and no conclusions can be formed (Lane, 2011). The insignificant association can be deemed unrelated to methodological difficulties because all appropriate stages in the approach relating

**Hypothesis 14: Social capital has a significant moderating role in the relationship between entrepreneurial finance and EO.**

As previously stated, this research used a two-stage strategy to investigate the moderating effect of social capital on the relationship between entrepreneurial finance and EO. The model's moderating impact test is shown in Table 9 and Figure 4. Hypothesis 14 demonstrated that the  $t$ -value 3.052 was greater than the cutoff value of 1.645 in Table 9 and Figure 4, indicating that the outcome was statistically significant. As a result, there was no credible evidence of social capital's

moderating influence on the link between entrepreneurial finance and EO ( $\beta = -0.085$ ,  $t = 3.052$ ,  $p > 0.05$ ).

**Hypothesis 15: Government regulations have a significant moderating role in the relationship between business startups and entrepreneurial development.**

The moderating influence of government regulations on the relationship between business startups and entrepreneurial development. In Table 9 and Figure 4, Hypothesis 15 showed that the  $t$ -value of 1.562 was less than the cutoff value of 1.645, indicating that the result was not statistically significant. As a result, no credible evidence of social capital's moderating effect on the link between business startups and entrepreneurial development ( $\beta = -0.095$ ,  $t = 0.061$ ,  $p < 0.05$  even negative) was found. H15 has been ruled out as a consequence, and no conclusions can be drawn (Lane, 2011).

**Hypothesis 16: Government regulations have a significant moderating role in the relationship between EO and entrepreneurial development.**

As previously stated, this study investigated the moderating effect of government regulations on the relationship between EO and entrepreneurial development using a (technique name). Table 4.6.1.3 and Figure 4.6 depict the model's moderating influence test. In Table 9 and Figure 4, Hypothesis 16 indicated that the  $t$ -value 2.268 was more than the cutoff value of 1.645, indicating that the outcome was statistically significant. As a result, government regulations appeared to have a moderating effect on the relationship between EO and entrepreneurial development ( $\beta = 0.144$ ,  $t = 2.268$ ,  $p < 0.05$ ).

## **4.7 Summary of the Findings**

The findings of the investigation were outlined in this chapter. In order to profile the respondents, SPSS was used. It was used in the process of determining the validity and reliability of the measurements. PLS-SEM bootstrapping was used in order to conduct the evaluation of the study hypotheses. It was found that there was sufficient both discriminant and convergent validity in the measurement paradigm. The structural and measurements models were then put through their paces.

## Chapter Five

### Discussion and Conclusion

#### 5.1 Discussion

##### 5.1.1 Services of Business Incubators and Business Startups

Business incubator programs help a variety of new businesses to start up (Lukosiute, Jensen, & Tanev, 2019). Furthermore, business incubators may give expert business advice, network services, technology-related support, and other skills and training programs that may lead to improved entrepreneurial activity in the domestic country. As stated by the Carayannis and Von Zedtwitz (2005), a business incubator center is the place where different business starter rather small scale, medium scale and large scale business can get the help to faster business in earlier stage. Furthermore, business incubator centers also provide facilities, such as partnership, and collaborate with different types of organizations and government entities to organize investment-related ventures. Additionally, R. Grimaldi and Grandi (2005) stated that business incubator centers provide resources for startups by offering managerial training and access to capital, and assist business startups in their operational activities. Therefore, business incubator services undoubtedly have a significant role in startups and new ventures. In this regard, the current study found that the services of business incubators had a significant impact on business startups (Guerrero, Urbano, & Gajón, 2020). According to the results, there is positive and significant relationship between business incubator services and business startups (Lesakova, 2012).

In the established literature related to incubator services there two type of categories. The first focuses on planning and managing the available resources (A. Ahmad & Ingle, 2013), whereas the second provides control of outline success indicators like technologies and economics. According to (Li et al., 2020), entrepreneurial development in the context of different countries in the past literature, and some research have linked entrepreneurial growth with business incubators. Mahmood, Jamil, et al. (2016) concluded that business incubators are considered an essential factor in promoting entrepreneurial activities, and entrepreneurial activities can expand opportunities to create jobs. The research guided through the result that there is a positive association. Business incubators act as facilitators that provide a path at low cost; so, entrepreneurial activity grows (Ackermann et al., 2020).

### **5.1.2 Services of Business Incubators and EO**

EO is the process or strategies that help in the decision to introduce a new product or to establish a new market. Thus, incubator centers and firms promote commercialization of products and technology development. Therefore, this study also entertained EO as a variable that helps to achieve the commercialization of technology and products. Clausen and Korneliussen (2012) also agreed that business incubator centers have a positive and significant impact on EO. Furthermore, they also pointed out that business incubator centers support in accelerating the commercialization of products and technology through EO. Moreover, speed to market is important for incubator centers for several reasons and one of them is there is a lack of sales in initial startups; therefore, new ventures need to reap for the first sales.

### **5.1.3 Services of Business Incubators and Entrepreneurial Development**

The world has become a global village; social scientists are focusing on entrepreneurial development to reduce economic uncertainty and poverty. Entrepreneurial development is not possible without providing opportunities for new startups. In this regard, business incubator centers or programs play a vital role in starting new businesses. As a result, entrepreneurial development is being promoted. Wonglimpiyarat (2014b) supported the concept that business incubator centers play a vital role in promoting entrepreneurial activities, which helps to achieve entrepreneurial development. In a developed country like the UK, there are almost 300 business incubator centers (UKBI, 2012); the aim is to provide opportunities for people to conduct a survey for the founders of the new startup for their turnover and become job creators.

Mahmood, Jamil, et al. (2016) stated that business incubator centers provide effective and efficient strategies to promote entrepreneurial activities in domestic countries. Furthermore, they also play a significant role in new business startups, which helps them to achieve entrepreneurial development goals. The findings of this investigation indicate a significant and favorable relationship observed between business incubator centers and entrepreneurial development (Adair, Kenny, & McGuirk, 2021; Saavedra, Kotey, & Sandhu, 2020; Ssekiziyivu, Mwesigwa, Kabahinda, Lakareber, & Nakajubi, 2021,Adkins (1996)).

#### **5.1.4 Entrepreneurial Finance and Business Startups**

Entrepreneurial finance is considered the backbone of business for new startups (S. Coleman, 2000; Ko & McKelvie, 2018), but it is not deniable that EO matters a lot while starting up a new business (Robb & Robinson, 2014). The study's findings showed that there is just a insignificant between entrepreneurial finance and business startups. The reason for the insignificant relationship, especially in the context of Pakistan, is that entrepreneurial finance and business startup are considered the same in context. Furthermore, in Pakistan, if someone needed to start a new business they would firstly think about finance and would commonly think that if finance was arranged, then they could start new businesses. Entrepreneurial finance is a field that covers the whole process of investing in new businesses. It is aimed at anyone with a basic understanding of finance who wants to learn more about investing in startups. Business angels, venture capitalists, family offices, corporate venture funds, impact investors, consultants, regional development groups, and advisers are all potential players. This training will also assist other professions that contact startups in the process of obtaining money, such as attorneys, accountants, or consultants, or who advise VC firms and need to understand how they function.

#### **5.1.5 Entrepreneurial Finance and EO**

According to the above discussion on the EO play vital role but as far as entrepreneurial finance is considered, it seems look as same as backbone of the business. Covin and Lumpkin (2011) argued that entrepreneurial finance and EO are interlinked with each other. Sidek, Mohamad, and Nasir (2016b) provided support for the result of this study, which indicated that there is significant relationship between entrepreneurial finance and EO.

#### **5.1.6 Mediating Role of Business Startups**

Entrepreneurial finance is statistically positively related to the entrepreneurial development (Fraser, Bhaumik, & Wright, 2015). For this type of entrepreneurial development, the functions of business startups and entrepreneurial mindset are equally critical (Cho & Lee, 2018). The role of entrepreneurial finance in entrepreneurial development has been highlighted in the literature. It has been discussed that entrepreneurial ventures face lots of difficulties, especially in the financial context, while developing and executing business plans (Fraser et al., 2015). This is most probably

due to the costs that are involved in the initiation of a business venture from the crash. Moreover, the roles of financial institutions and intermediaries, and the linked entrepreneurial finance, have been found to be important in the context of financially supporting entrepreneurs (D. Cumming & Johan, 2017).

### **5.1.7 Mediating role of EO**

Networks on both the internal and exterior of a business incubator have a beneficial effect on new entrepreneurial success, and EO helps to mediate this relationship (Wu, Wang, & Tsai, 2020). However, the trend of business incubators in Pakistan is extremely low, and there are very few such incubators in Pakistan that could be of assistance to entrepreneurs. In addition, Pakistani entrepreneurs experience a lack of financial backing for their firms, which demoralizes them and causes them to give up quickly, harming their country's entrepreneurial development. Similarly, entrepreneurial development in Pakistan is hampered by a lack of proper and favorable government regulations as well as by a lack of social capital (Zreen, Farrukh, Nazar, & Khalid, 2019). All of these difficulties afflict other developing and impoverished countries, impeding their entrepreneurial development. All of these practical issues point to the need for a study to look into the impact of business incubator services and entrepreneurial finance on entrepreneurial development, as well as the mediating role of business startups and EO, and the moderating role of government regulations and social capital, particularly in Pakistan. According to Li et al. (2020), there are two key reasons for this: high population growth and rising unemployment. Pakistan has the world's sixth-largest population, with 60% of the population under the age of 30. According to the Pakistan Statistical Bureau, Pakistan's jobless rate has been steadily rising from 3.79% to 4.45% since 2016, and the International Monetary Fund has predicted that unemployment will rise by 5% by 2025.

### **5.1.8 Moderating Effect of Government Regulations and Social Capital**

In addition to these factors, favorable government policies for entrepreneurship and social capital may influence the large impact of incubator services and entrepreneurial funding on entrepreneurial development (Neumeyer, Santos, Caetano, & Kalbfleisch, 2019).

### **5.1.9 Moderating Role of Social Capital**

The role of social capital as a moderating variable was described by Manolova, Eunni, and Gyoshev (2008). Entrepreneurial activities are heavily influenced by micro-level and macro-level policies; micro-level policies are formed within the home or company, while macro-level policies are influenced by government regulations (McMullen, Bagby, & Palich, 2008). According to Rafique (2019), 64% of Pakistan's population is under 30-years old. This is a great economic strength for increasing productivity and economic growth. Pakistan is involved with many groups on an individual basis and works with the government to provide seminars to promote entrepreneurship. Furthermore, researchers proposed that social capital be included as a moderating component to ensure the model's accuracy (Li et al., 2020). It is critical to incorporate entrepreneurial finance in a business incubator when discussing new businesses (Ackermann et al., 2020), which has a substantial impact on entrepreneurial development.

### **5.1.10 Moderating Role of Government Regulations**

Government regulations are defined as the rules that business owners and laypeople must follow (Bernstein, 2015). Regulators may create new industries to help other corporations stay compliant. Government regulations may save businesses in bad economic times. Government may help with loans, information, and services in good and poor times (Gnyawali & Fogel, 1994; Karki, 2010; Li, Ahmed, Qalati, Khan, & Naz, 2020). Van Stel, Storey, and Thurik (2007) investigated the link between entrepreneurial and regulation in 39 countries. The study found that minimum capital requirements and labor market restrictions limit entrepreneurship globally. Moreover, administrative problems, such as cost, time, and processes, have minimal influence on the pace of new company creation. Government policies and actions that impact businesses contribute to the external environment's variety and social embeddedness (Smallbone & Welter, 2010). Moreover, Akhmetshin and Shafigullina (2015) claimed that lack of transportation, innovative, financial, managerial, and logistical infrastructure is a major hindrance to entrepreneurial growth. This suggests that government regulations should be changed to have a significant influence on small businesses.

## 5.2 Conclusion

The relevance of services of business incubators, entrepreneurial finance, and restrictions in promoting entrepreneurship is explored in this study, which adds to current knowledge. This research intends to build a concept for examining the function of the services of business incubators and entrepreneurial finance in supporting entrepreneurial development by providing better services (business advice, network services, technological support, and training programs). Second, it looks at the function of business startups and EO in mediating between services of business incubators, entrepreneurial finance and entrepreneurial development. Third, social capital moderates the services of business incubators, entrepreneurial finance and business startups, and EO and government regulations moderate entrepreneurship business startups, EO and entrepreneurial development. As a consequence of this, the results of this research demonstrate that promoting the growth of entrepreneurship is essential to the improvement of a struggling economy . the results of industry. Services offered by business incubators, such as those offering advise on starting a firm, training programmes, finance, and networking opportunities, are essential to the process of promoting entrepreneurship. It should not come as a surprise that new business owners face a number of challenges, such as an inadequate educational and technical expertise, severely restricted buildings and services, and support systems. Furthermore, it should not come as a surprise that the majority of entrepreneurs fail within the first few years of operation. In a scenario like this one, business incubators have the potential to play a pivotal role in ensuring the learning and expansion of small businesses. To comprehend the theoretical relationships, a resource-based conception of the company and entrepreneurial economic theory were employed as a foundation. The bulk of the hypotheses were supported, which gave the research model a lot of empirical support: that business incubators play a significant role in economic growth and the development of entrepreneurship (Al-Mubarak & Busler, 2010; Salem, 2014). Entrepreneurial finance enhances entrepreneurial development (Keerativutisest & Promsiri, 2021; Khattak, Anwar, & Clauß, 2021). The results suggest the Pakistani government has taken various steps to help entrepreneurs, including establishing institutions such as the National Incubation Centre, the Small and Medium Enterprises Development Authority for Entrepreneurship, and universities' incubation centers, all of which excel at incubating and managing new businesses' entrepreneurial development. However, more work needs to be done in order to create long-term entrepreneurial

development. According to the results, the government ought to consider creating a single point of contact to oversee business incubators across the country and to coordinate the actions of all institutions and firms involved in the incubation process. In addition, because most startups today have a service-based business model, an industry incubator is needed to boost production. According to the findings, governments in both rich and developing nations should focus on business incubation and government laws for entrepreneurship in order to build an entrepreneurial culture, because business incubators are ineffective without government regulations.

### **5.3 Theoretical Implications**

- The study's findings supports the incubators and their stakeholders in deploying their facilities not only to help incubates but also to enhance the entrepreneurial ecosystem.
- This study defines and evaluates essential factors for determining the efficiency of an incubator. As a result, policymakers, government officials, incubator managers, stakeholders, researchers, and practitioners get the benefit by implementation economic theory of entrepreneurship because the aim is to boost the economies.
- This study is also support a startup business in strengthening its incubation facilities and processes, as well as creating a well-considered and well-studied route for growth and progress of the organization as well as economies by effectively and efficiently utilizing available tangible and intangible resources.
- Furthermore, this study provided the idea and understanding of framework where incubation center employee for the optimal resources allocation.

### **5.4 Practical Implications**

Around the globe, the concept of incubation is gaining popularity owing to its potential to foster a climate that is conducive to the growth of entrepreneurship (Eshun, 2009; Mahmood, Jianfeng, Munir, & Yasir, 2016). The function of business incubators in minimizing company risks and stimulating business innovation may be crucial in today's world. It is a combination of actions that involves infrastructure supply, realistic rules, and regulatory oversight in order to convert innovative company ideas into monetary value for investors. A number of academics feel that restricting the accessibility of incubators will encourage more company startups and bring about fewer failures (Hackett & Dilts, 2004). Its purview has been widened to encompass job creation,

economic self-efficacy, and socioeconomic development, as well as technology acquisition between universities and the private sector, as well as the sharing of entrepreneurship experiences (Chandra & Chao, 2016; Mahmood, Jianfeng, et al., 2016; Q. Tang, Zhang, Yang, & Francis, 2013; Theodorakopoulos, Kakabadse, & McGowan, 2014). An entrepreneur, on the other hand, has been characterized in a variety of ways by various scholars, and the concept has become more nuanced over time (Bergek & Norrman, 2008). There are numerous public and private universities in Pakistan that offer a variety of courses with a variety of specializations. Any of these colleges could assist in the development of new business strategies as well as the reduction of unemployment. Local university graduates, on the other hand, are less successful than international university graduates. Furthermore, the entrepreneurs in this region lack the necessary entrepreneurship talents and financial assistance to run their businesses successfully in this globally competitive market. As a result, business incubators are required to play a critical involvement in a situation like that (Jemal, Siegel, Xu, & Ward, 2010; Shahzad, Ali, & Khan, 2012).

Because of the increasing number of incubators being established throughout the globe as a method of guiding strong economic development, the necessity to assess their effectiveness among government and other organizations that support autonomous incubators is becoming more apparent (Rustam Lalkaka, 2002, 2006). However, a study of the literature reveals that very few studies have focused on evaluating the effect of incubation on entrepreneurial development. Therefore, there is a considerable research deficit in this topic, especially with respect to Pakistan. The present study is an effort to add to the research on corporate incubation services by investigating the role of business incubators in entrepreneurial growth in Pakistan. Increasing recognition that breakthroughs and entrepreneurs are the key drivers of economic development in Pakistan has resulted in efforts to promote science and technology projects in order to improve the economy's inventive basis. As a result of these efforts to support the climate for business startups and success in Pakistan, business incubators were born. According to a report, TBIs should be started involvement in a situation like that by both the public and private sectors working together to foster an entrepreneurial society (Jamil, Ismail, & Mahmood, 2015). This study adds to the expanding mass of knowledge in the field of entrepreneurship. First, it increases awareness of the role and value of business incubators, entrepreneurial finance in entrepreneurship development.

If government and NGOs implemented the recommended approach based on the results of this research, then they would be better able to educate entrepreneurs and reduce the rate of failure in the long run. Legislators and policymakers would be advised and assisted in selecting what aspects of entrepreneurship should be highlighted in legislation in order to increase the quality and long-term sustainability of the sector. It also aids future scholars in a comparable subject by elaborating on areas of interest that require more investigation and analysis. The study can assist recent CEOs by providing them with new business opportunities and clarifying the relevance of specialized training in boosting entrepreneurship.

The conceptual investigation of the important fundamental aspects for entrepreneurship growth is another contribution of this research. Another contribution is putting the scattered material on entrepreneurial ventures and entrepreneurship training into perspective with the larger entrepreneurial process is made by this publication once again. This research also provides an initial framework for future theoretical development and testing, with the goal of stimulating more complete and comprehensive assessment of the factors that determine the success of entrepreneurial growth. This thesis also aids the government in establishing an exclusive framework for awarding grants to individuals and businesses who pursue new ideas, test new products, or develop new services. The conclusions of this study will assist new entrepreneurs to take the necessary steps to establish a new business with important activities in order to attract foreign investors to assist the domestic startup capital market with tax incentives.

## **5.5 Policy Recommendations**

The research also looked at the policy elements of entrepreneurship in Pakistan, resulting in policy suggestions for current and future entrepreneurship policy frameworks in Pakistan. Pakistan's worldwide commercial skills are well known, and the country has achieved significant progress in terms of general growth, development, and wealth. Agriculture, culture, tourism, literature, art, sports, education, and healthcare are just a few of the areas where New York State has excelled. The nation has strong infrastructure, human resources, and ambitious and enterprising people, all of which offer the essential motivation for any prospective opportunity to be realized. The Pakistani diaspora has built a unique market for itself all over the globe. Entrepreneurship and innovation are crucial to the economy's long-term success. As a result, we must support

entrepreneur-led startup enterprises as a vital pillar for economic development, job creation, wealth generation, and increased competitiveness. To build and promote entrepreneurship and entrepreneurial ecosystems inside the state, state governments must support cluster-specific bottom-up techniques. To develop connections and learning both inside and beyond the entrepreneurial ecosystem, the state must take an entrepreneur-centric strategy. By bringing entrepreneurs together in an atmosphere that encourages learning and supports their entrepreneurial activities, the state may encourage networking between entrepreneurs and entrepreneurial support groups. The government should create a specialized institution to spearhead the development of a strategy and action plan to support startups and entrepreneurship in Pakistan.

Based on the following research recommendations, the government of Pakistan may revise and update its existing "Entrepreneurship Development and Innovation Policy" in order to transform the country into a leading global entrepreneurship and innovation center, accelerate economic growth, and provide massive expansion of state entrepreneurship and job opportunities. All such alterations and revisions, however, must be implemented in the future and must not lessen any advantages or concessions provided by the company's current policies. For the purposes of this study, the researcher focused on best practices in the policymaking domain, to assist the government in clearly identifying policy goals and objectives within existing resource constraints, planning appropriate steps to assess current level of achievement, allowing amendments to overcome perceived and unperceived barriers, and identifying and disseminating best practices to improve the performance of individual units strewn across the country. The challenges addressed by the researcher are relevant to national, regional, and municipal governments, as well as people wanting to favorably impact government policy initiatives with the greater goal of boosting economic development.

In developing these policy suggestions, the researcher aims to highlight important concerns in the "best practice approach" to policymaking in the entrepreneurship sector, with a particular emphasis on entrepreneurship growth through startup incubators. Best practices are increasingly being utilized to drive public policymaking. This phrase may be used to refer to two distinct types of policy formation. On the one hand, best practices are characterized as "results-oriented decision making based on empirical data" (Cannon & Rebecca, 2003). Best practices, on the other hand,

can also refer to "successful initiatives or model projects that offer an excellent, long-term, and creative contribution to the subject at hand" (Bendixsen et al., 2003). These two definitions of best practice are connected to how the government tracks and analyzes the effects of various initiatives, based on high-quality objective data about what works (Canon & Rebecca, 2003). Other effect assessments are more impressionistic and depend on both experience and knowledge and more thorough evaluations (Schorr et al., 2003).

In actuality, both methods have a role in policy formulation, policy lobbying, and policy implementation; therefore, a balanced approach is required in identifying and analyzing the effect of public policy efforts, as well as learning how to revamp current policies and policy initiatives. This issue will be revisited in the research's last section, which deals with the monitoring and evaluation of policies and policy efforts.

For both methods to work well, it is critical to have a clear definition and understanding of what a policy is intended to accomplish in the short and long term, why it is necessary, how it will be implemented, when it will go live, and for how long (the initial period of public funding). The policy's implementation should then be monitored to measure and evaluate results against benchmarks (quantitatively and qualitatively), with the information utilized to enhance the policy's implementation to achieve targeted outcomes and assure effect.

## **5.6 Limitation**

This investigation was restricted to the territory of Pakistan alone. Even though the surveys were sent around the nation, we have only received replies from large cities. Due to constraints of both time and money due to time and resource restrictions, the sole method of data collection that was used was the field survey. It is possible to disseminate it via email, social media, and any number of other helpful channels. This research is more applicable to other developed and underdeveloping countries than it is to underdeveloped nations. This study has to be more in-depth by include social capital as a moderator on both sides of the conceptual model that is being utilized in the research. It is advised that more research be conducted in the future to further define the theoretical grounds of each of the variables and to enhance the measurement of certain aspects and factors in order to clarify the conceptual model for better empirical examination.

## 5.7 Future Direction

The attempts to establish the idea of incubator-incubation based on Startup Business, a Jaipur-based incubation center, construct categorization categories for comparison, and give policy recommendations for managing incubators are the highlights of this study. Despite the shortcomings of the aforementioned attempts, it should be highlighted that incubator development study is a unique exploratory, conceptual, empirical, and normative approach aimed at presenting a relatively new phenomenon. With the increased interest in incubator incubation, future study should concentrate not just on these understudied analytical units, but also on the incubation process itself. The topic of incubator-incubation effect is remarkably under-researched, which means there is plenty of room for further study. Although this research focuses on evidence-based treatments to improve the performance of a particular incubator, Startup Business, it might be expanded to additional incubators throughout the nation with few modifications. Furthermore, since this study is based on eight characteristics, future researchers could include other parameters, such as human resource capitalization, social effect, environmental impact, technology support, and intellectual property generation. This study presents parametric research for the construction of new incubators as well as comparison studies of incubators in the near future. Detailed study on policy elements in the entrepreneurship domain to suggest multilevel policy interventions in the current and new policy framework in the entrepreneurship domain in Pakistan may also be used in other Indian states, with some modifications.

Apart from the many obstacles encountered by an incubator as it works to help its stakeholders, this research evaluated several performance and efficiency indicators to assess the function of Startup Business. Without a doubt, Startup Business drastically increases the promotion of entrepreneurship and the development of the startup ecosystem. However, statistical gaps exist between the perceived and real services provided by Startup Business across all of the investigated metrics, but they are not significant. It has to continue to promote entrepreneurship in a more systematic and comprehensive manner. Entrepreneurs must also gain skillsets and business expertise; just establishing or creating a firm is insufficient. It must always enhance its services in order to meet expectations and support the needs of its customers. Incubators' portfolios should be pooled to create a comprehensive and transparent startup aid program focused on effectively fostering new businesses. The research reveals that in addition to a desire to be self-sufficient, a

startup business confronts a number of obstacles, including a lack of funding, manufacturing space, modern technological facilities, and diversification into other industries.

- This research examined a startup business's performance based on the organization's capacity-building efforts, taking into account eight performance factors; it was discovered that a startup business's performance is efficient.
- This research found a positive linear autocorrelation relationship between a startup business's capacity-building activities and its performance, implying that improving a startup business's capacity-building activities would increase its performance.
- To address the inefficiency in a startup business's performance, measures of improvement in its capacity-building activities have been proposed, which have the potential to improve the conduciveness of a startup business's support system for its incubatee entrepreneurial enterprises.
- Eleven major policy interventions in the entrepreneurship sector have been identified, with various suggestions made under each key area that, if adopted, may assist Pakistan create a flourishing entrepreneurial environment.
- For the in-depth analysis dimension of business incubator center also investigate with the entrepreneurial orientation and with the entrepreneurial development.

## References

- Aaboen, L. (2009). Explaining incubators using firm analogy. *Technovation*, 29(10), 657-670.
- Abbas, J., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The impact of entrepreneurial business networks on firms' performance through a mediating role of dynamic capabilities. *Sustainability*, 11(11), 3006.
- Aburahma, I. A., Amuna, Y. M. A., & Aqel, A. M. (2020). The Relationship between GHRM Practices and Organizational Performance" Case study: Gaza University". *International Journal of Academic Management Science Research (IJAMSR)*, 4(4).
- Achleitner, A.-K., Braun, R., Lutz, E., & Reiner, U. (2014). Industry relatedness in trade sales and venture capital investment returns. *Small Business Economics*, 43(3), 621-637.
- Ackermann, E., Bock, C., & Bürger, R. (2020). Democratising entrepreneurial finance: The impact of crowdfunding and Initial Coin Offerings (ICOs) *Contemporary Developments in Entrepreneurial Finance* (pp. 277-308): Springer.
- Acs, Z., Audretsch, D. B., Braunerhjelm, P., & Carlsson, B. (2004). The missing link: The knowledge filter and entrepreneurship in endogenous growth. *Available at SSRN 667944*.
- Acs, Z., & Virgill, N. (2010). Foundations and Trends® in Entrepreneurship. *Foundations and Trends® in Entrepreneurship*, 6(1), 1-68.
- Adair, M., Kenny, B., & McGuirk, H. (2021). Stand Alone or Continue to Support: Exploring the Need for Post Incubation Services for New and Growing Enterprises. *Irish Business Journal*, 13(1), 3.
- Adejoh, A. (2013). Financing of small scale business in Nigeria: Challenges and opportunities: A case study of FCT: A Post-graduate (MBA) Project Submitted to the Department of Business Administration and Entrepreneurship. *Bayero University, Kano, Nigeria*.

- Adelman, I. (1961). *Theories of Economic Growth and Development* Stanford University Press: Stanford, CA.
- Adkins, D. (1996). *National Business Incubation Association 10th anniversary survey of business incubators, 1985-1995: a decade of success*: National Business Incubation Association.
- Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of management Review*, 27(1), 17-40.
- Aerts, K., Matthyssens, P., & Vandenbempt, K. (2007). Critical role and screening practices of European business incubators. *Technovation*, 27(5), 254-267.
- Agarwal, R., & Bayus, B. L. (2002). The market evolution and sales takeoff of product innovations. *Management Science*, 48(8), 1024-1041.
- Agarwal, R., & Shah, S. K. (2014). Knowledge sources of entrepreneurship: Firm formation by academic, user and employee innovators. *Research policy*, 43(7), 1109-1133.
- Agrawal, A., Catalini, C., & Goldfarb, A. (2013). Crowdfunding: Social frictions in the flat world. *NBER Working Paper*, 16820.
- Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015a). PTE&.
- Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015b). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955-980.
- Ahmad, A., & Ingle, S. (2013). Business incubators and HTSF development: Setting an agenda for further research *New technology-based firms in the New Millennium*: Emerald Group Publishing Limited.
- Ahmad, N. (2008). and Seymour, R.(2008),“Defining entrepreneurial activity: definitions supporting frameworks for data collection”: working paper.
- Ahmed. (2017). A Quarter Century of Economic Reforms of India (1991-2016). *Theoretical Economics Letters*, 7(05), 1102.

- Ahmed, Hassan, M. H., & Taha, Z. (2004). State of implementation of TPM in SMIs: a survey study in Malaysia. *Journal of Quality in Maintenance Engineering*.
- Ahmed, & Kumar, M. (2015). BOP theory in an emerging market economy: India under the microscope. *International Journal of Business and Economic Development (IJBED)*, 3(2).
- Ahmed, G. (2016). Living Luxury in the Middle East. *FORBES Middle East*, August, 41.
- Ajagbe, M. A., & Ismail, K. (2014). Factors influencing venture capital assessment of high growth companies in Malaysia. *International Journal of Entrepreneurship and Small Business*, 21(4), 457-494.
- Akhmetshin, R., & Shafigullina, A. (2015). Government regulation of small and medium entrepreneurship under the influence of value-time benchmarks. *Mediterranean Journal of Social Sciences*, 6(1 S3), 151-151.
- AKHTER, A., HOSSAIN, M. U., & ASHEQ, A. A. (2020). Influential factors of social entrepreneurial intention in Bangladesh. *The Journal of Asian Finance, Economics, and Business*, 7(8), 645-651.
- Al-Mubarak, H. M., & Busler, M. (2010). Business incubators: Findings from a worldwide survey, and guidance for the GCC states. *Global Business Review*, 11(1), 1-20.
- Al-Mubarak, H. M., & Busler, M. (2011). The development of entrepreneurial companies through business incubator programs. *International Journal of Emerging Sciences*, 1(2), 95.
- Al-Mubarak, H. M., & Busler, M. (2012). The incubators economic indicators: Mixed approaches. *Journal of Case Research in Business and Economics*, 4, 1.
- Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*.

- Allen, D. N., & McCluskey, R. (1991). Structure, policy, services, and performance in the business incubator industry. *Entrepreneurship theory and practice*, 15(2), 61-77.
- Allen, N. (1985). *An entrepreneurial marriage: business incubators and startups*. Paper presented at the Frontiers of Entrepreneurship Research, Entrepreneurship Research conference, Babson College, Centre for Entrepreneurship studies.
- Allen, N., & Hall, T. W. (2008). Innovation, managerial effort, and start-up performance. *Journal of Entrepreneurial Finance and Business Ventures*, August.
- Alpenidze, O., Pauceanu, A. M., & Sanyal, S. (2019). Key success factors for business incubators in Europe: An empirical study. *Academy of Entrepreneurship Journal*, 25(1), 1-13.
- Alperovych, Y., & Hübner, G. (2013). Incremental impact of venture capital financing. *Small Business Economics*, 41(3), 651-666.
- Alrawadieh, Z., Karayilan, E., & Cetin, G. (2019). Understanding the challenges of refugee entrepreneurship in tourism and hospitality. *The Service Industries Journal*, 39(9-10), 717-740.
- Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of management*, 27(6), 755-775.
- Amit, R., Brander, J., & Zott, C. (1998). Why do venture capital firms exist? Theory and Canadian evidence. *Journal of Business Venturing*, 13(6), 441-466.
- Andreu, R., & Ciborra, C. U. (2009). Organizational learning and core capabilities development: the role of IT *Bricolage, Care and Information* (pp. 189-205): Springer.
- Andries, P., & Czarnitzki, D. (2014). Small firm innovation performance and employee involvement. *Small Business Economics*, 43(1), 21-38.

- Angerer, M., Brem, A., Kraus, S., & Peter, A. (2017). Start-up funding via equity crowdfunding in Germany: A qualitative analysis of success factors. *The Journal of Entrepreneurial Finance (JEF)*, 19(1), 1-34.
- Antonenko, P. D., Lee, B. R., & Kleinheksel, A. J. (2014). Trends in the crowdfunding of educational technology startups. *TechTrends*, 58(6), 36-41.
- Aparicio, S., Urbano, D., & Audretsch, D. (2016). Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological forecasting and social change*, 102, 45-61.
- Arenius, P., & De Clercq, D. (2005). A network-based approach on opportunity recognition. *Small Business Economics*, 24(3), 249-265.
- Armellini, F., Dega, C., Garcia, A., & Machado, F. (2019). Techno-entrepreneurship development support in theory and practice: the case of incubators and accelerators in Canada *Handbook of Research on Techno-Entrepreneurship, Third Edition*: Edward Elgar Publishing.
- Arqué-Castells, P. (2012). How venture capitalists spur invention in Spain: Evidence from patent trajectories. *Research policy*, 41(5), 897-912.
- Asad, A., Ali, H. M., & Islam, U. (2014). The relationship between entrepreneurship development and unemployment reduction in Pakistan. *Global journal of management and business research*.
- Asif, M., Asghar, F., Younis, A., Mahmood, A., & Wang, L. Z. (2018). The role of social entrepreneurship in Pakistan and its impact on economy. *International Journal of Business, Economics and Management*, 5(5), 117-127.
- Aslam, S., & Hasnu, S. (2016). Issues and constraints perceived by young entrepreneurs of Pakistan. *World Journal of Entrepreneurship, Management and Sustainable Development*.
- Auken, H. E. V., & Neeley, L. (1996). Evidence of bootstrap financing among small start-up firms. *Journal of Entrepreneurial and Small Business Finance*, 5(3), 235-249.

- Ayyagari, M., Beck, T., & Demirguc-Kunt, A. (2007). Small and medium enterprises across the globe. *Small Business Economics*, 29(4), 415-434.
- Baker, W. E. (1990). Market networks and corporate behavior. *American journal of sociology*, 96(3), 589-625.
- Balboa, M., Martí, J., & Zieling, N. (2011). Impact of funding and value added on Spanish venture capital-backed firms. *Innovation: The European Journal of Social Science Research*, 24(4), 449-466.
- Baptista, F. R., Belhout, S. A., Giordani, S., & Quinn, S. J. (2015). Recent developments in carbon nanomaterial sensors. *Chemical Society Reviews*, 44(13), 4433-4453.
- Barnett, J., & Chafee, L. (2017). *Redesigning cities: Principles, practice, implementation*: Routledge.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Barney, J. (1995). Looking inside for competitive advantage. *Academy of Management Perspectives*, 9(4), 49-61.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic management journal*, 20(5), 421-444.
- Baruteau, C., Meru, F., & Paardekooper, S.-J. (2011). Rapid inward migration of planets formed by gravitational instability. *Monthly Notices of the Royal Astronomical Society*, 416(3), 1971-1982.

- Bastié, F., Cieply, S., & Cussy, P. (2013). The entrepreneur's mode of entry: the effect of social and financial capital. *Small Business Economics*, 40(4), 865-877.
- Batjargal, B. (2003). Social capital and entrepreneurial performance in Russia: A longitudinal study. *Organization studies*, 24(4), 535-556.
- Baum, J. A., & Silverman, B. S. (2004). Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups. *Journal of Business Venturing*, 19(3), 411-436.
- Beck, T., & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & finance*, 30(11), 2931-2943.
- Becker, M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models. *Long range planning*, 45(5-6), 359-394.
- Becker, M. C., Knudsen, T., & Swedberg, R. (2012). Schumpeter's Theory of Economic Development: 100 years of development. *Journal of Evolutionary Economics*, 22(5), 917-933.
- Beisert, N., Ahn, C., Alday, L. F., Bajnok, Z., Drummond, J. M., Freyhult, L., . . . Klose, T. (2012). Review of AdS/CFT integrability: an overview. *Letters in Mathematical Physics*, 99(1), 3-32.
- Bellavitis, C., Filatotchev, I., Kamuriwo, D. S., & Vanacker, T. (2017). Entrepreneurial finance: new frontiers of research and practice: Editorial for the special issue Embracing entrepreneurial funding innovations: Taylor & Francis.
- Beltrán-Martín, I., Bou-Llusar, J. C., Roca-Puig, V., & Escrig-Tena, A. B. (2017). The relationship between high performance work systems and employee proactive behaviour: role breadth self-efficacy and flexible role orientation as mediating mechanisms. *Human Resource Management Journal*, 27(3), 403-422.

- Bercovitz, J., Feldman, M., Feller, I., & Burton, R. (2000). Strategy and structure as determinants of academic patent and licensing behavior. *Organizational Issues in University-Industry Technology Transfer*.
- Bergek, A., & Norrman, C. (2008). Incubator best practice: A framework. *Technovation*, 28(1-2), 20-28.
- Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of banking & finance*, 22(6-8), 613-673.
- Bernstein, M. H. (2015). *Regulating business by independent commission*: Princeton University Press.
- Berrell, M., & Lilai, X. (2009). Business incubation in China. *Management Research Review*, 33(1), 90-99.
- Bertoni, F., Colombo, M. G., & Grilli, L. (2011). Venture capital financing and the growth of high-tech start-ups: Disentangling treatment from selection effects. *Research policy*, 40(7), 1028-1043.
- Bertoni, F., Colombo, M. G., & Quas, A. (2015). The patterns of venture capital investment in Europe. *Small Business Economics*, 45(3), 543-560.
- Bessler, W., & Kurth, A. (2007). Agency problems and the performance of venture-backed IPOs in Germany: Exit strategies, lock-up periods, and bank ownership. *The European Journal of Finance*, 13(1), 29-63.
- Binks, M. R., & Ennew, C. T. (1996). Growing firms and the credit constraint. *Small Business Economics*, 8(1), 17-25.
- Bizri, R. M. (2017). Refugee-entrepreneurship: A social capital perspective. *Entrepreneurship & Regional Development*, 29(9-10), 847-868.

- Bjørnskov, C., & Foss, N. J. (2016). Institutions, entrepreneurship, and economic growth: what do we know and what do we still need to know? *Academy of Management Perspectives*, 30(3), 292-315.
- Black, K. (2019). *Business statistics: for contemporary decision making*: John Wiley & Sons.
- Blau, P. M., & Scott, W. R. (2003). *Formal organizations: A comparative approach*: Stanford University Press.
- Block, J. H., Groh, A., Hornuf, L., Vanacker, T., & Vismara, S. (2020). The entrepreneurial finance markets of the future: a comparison of crowdfunding and initial coin offerings. *Small Business Economics*, 1-18.
- Block, P. (2018). *Community: The structure of belonging*: Berrett-Koehler Publishers.
- Blumberg, M. S., Lewis, S. J., & Sokoloff, G. (2002). Incubation temperature modulates post-hatching thermoregulatory behavior in the Madagascar ground gecko, *Paroedura pictus*. *Journal of Experimental Biology*, 205(18), 2777-2784.
- Bourdieu, P. (2011). The forms of capital.(1986). *Cultural theory: An anthology*, 1, 81-93.
- Bourdieu, P., & Richardson, J. G. (1986). *Handbook of Theory and Research for the Sociology of Education*: Greenwood Press New York.
- Bourdieu, P., & Wacquant, L. J. (1992). *An invitation to reflexive sociology*: University of Chicago press.
- Bowen, M., Morara, M., & Mureithi, M. (2009). Management of business challenges among small and micro enterprises in Nairobi-Kenya. *KCA journal of business management*, 2(1).
- Branstad, A., & Saetre, A. S. (2016). Venture creation and award-winning technology through co-produced incubation. *Journal of Small Business and Enterprise Development*.
- Bray, M. J., & Lee, J. N. (2000). University revenues from technology transfer: Licensing fees vs. equity positions. *Journal of Business Venturing*, 15(5-6), 385-392.

- Brown, R., Mawson, S., Rowe, A., & Mason, C. (2018). Working the crowd: Improvisational entrepreneurship and equity crowdfunding in nascent entrepreneurial ventures. *International Small Business Journal*, 36(2), 169-193.
- Brush, C. G., Greene, P. G., & Hart, M. M. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Perspectives*, 15(1), 64-78.
- Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations (Vol. 39, pp. 9-26): SAGE Publications Sage CA: Los Angeles, CA.
- Bruton, G. D., Ahlstrom, D., & Si, S. (2015). Entrepreneurship, poverty, and Asia: Moving beyond subsistence entrepreneurship. *Asia Pacific Journal of Management*, 32(1), 1-22.
- Bruton, G. D., Chahine, S., & Filatotchev, I. (2009). Founders, private equity investors, and underpricing in entrepreneurial IPOs. *Entrepreneurship Theory and Practice*, 33(4), 909-928.
- Bryman, A. (2004). Qualitative research on leadership: A critical but appreciative review. *The leadership quarterly*, 15(6), 729-769.
- Byrdin, M., Sartor, V., Eker, A. P., Vos, M. H., Aubert, C., Brettel, K., & Mathis, P. (2004). Intraprotein electron transfer and proton dynamics during photoactivation of DNA photolyase from *E. coli*: Review and new insights from an “inverse” deuterium isotope effect. *Biochimica et Biophysica Acta (BBA)-Bioenergetics*, 1655, 64-70.
- Campbell, C. (1989). Change Agents In The New Economy: Business Incubators And E. *Economic Development Review*, 7(2), 56.
- Campbell, C., & Mitchell, D. T. (2012). A (partial) review of entrepreneurship literature across disciplines. *Journal of Entrepreneurship and Public Policy*.

- Carayannis, E. G., & Von Zedtwitz, M. (2005). Architecting gloCal (global–local), real-virtual incubator networks (G-RVINs) as catalysts and accelerators of entrepreneurship in transitioning and developing economies: lessons learned and best practices from current development and business incubation practices. *Technovation*, 25(2), 95-110.
- Carmeli, A. (2004). Assessing core intangible resources. *European Management Journal*, 22(1), 110-122.
- Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and statistics*, 84(2), 298-309.
- Carter, S., Shaw, E., Wilson, F., & Lam, W. (2006). Gender, entrepreneurship and business finance: Investigating the relationship between banks and entrepreneurs in the UK. *Growth-oriented women entrepreneurs and their businesses—A global research perspective*, 373-392.
- Cassar, G. (2004). The financing of business start-ups. *Journal of Business Venturing*, 19(2), 261-283.
- Chandra, A., & Chao, C.-A. (2016). Country context and university affiliation: a comparative study of business incubation in the United States and Brazil. *Journal of technology management & innovation*, 11(2), 33-45.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*: sage.
- Chemin, M. (2010). Entrepreneurship in Pakistan: government policy on SMEs, environment for entrepreneurship, internationalisation of entrepreneurs and SMEs. *International journal of business and globalisation*, 5(3), 238-247.
- Chemmanur, T. J., & Fulghieri, P. (2014). Entrepreneurial finance and innovation: An introduction and agenda for future research. *The Review of Financial Studies*, 27(1), 1-19.

- Chemmanur, T. J., Krishnan, K., & Nandy, D. K. (2011). How does venture capital financing improve efficiency in private firms? A look beneath the surface. *The review of financial studies*, 24(12), 4037-4090.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Chin, W. W. (2010). How to write up and report PLS analyses *Handbook of partial least squares* (pp. 655-690): Springer.
- Cho, Y. H., & Lee, J.-H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. *Asia Pacific Journal of Innovation and Entrepreneurship*.
- Cholakova, M., & Clarysse, B. (2015). Does the possibility to make equity investments in crowdfunding projects crowd out reward-based investments? *Entrepreneurship Theory and Practice*, 39(1), 145-172.
- Chow, W. S., & Chan, L. S. (2008). Social network, social trust and shared goals in organizational knowledge sharing. *Information & management*, 45(7), 458-465.
- Chrisman, J. J., Bauerschmidt, A., & Hofer, C. W. (1998). The determinants of new venture performance: An extended model. *Entrepreneurship theory and practice*, 23(1), 5-29.
- Clandinin, D. J., & Connelly, F. M. (2004). *Narrative inquiry: Experience and story in qualitative research*: John Wiley & Sons.
- Clarysse, B., Wright, M., Bruneel, J., & Mahajan, A. (2014). Creating value in ecosystems: Crossing the chasm between knowledge and business ecosystems. *Research policy*, 43(7), 1164-1176.
- Clarysse, B., Wright, M., Lockett, A., Van de Velde, E., & Vohora, A. (2005). Spinning out new ventures: a typology of incubation strategies from European research institutions. *Journal of Business Venturing*, 20(2), 183-216.

- Clausen, T., & Korneliussen, T. (2012). The relationship between entrepreneurial orientation and speed to the market: The case of incubator firms in Norway. *Technovation*, 32(9-10), 560-567.
- Coakes, S. (2013). SPSS version 20.0 for Windows. *Analysis without anguish*.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*: Academic press.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American journal of sociology*, 94, S95-S120.
- Coleman, S. (2000). Access to capital and terms of credit: A comparison of men-and women-owned small businesses. *Journal of small business management*, 38(3), 37.
- Colombo, M. G., & Murtinu, S. (2017). Venture capital investments in Europe and portfolio firms' economic performance: Independent versus corporate investors. *Journal of Economics & Management Strategy*, 26(1), 35-66.
- Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*: Sage publications.
- Cosh, A., Cumming, D., & Hughes, A. (2009). Outside entrepreneurial capital. *The Economic Journal*, 119(540), 1494-1533.
- Coviello, N. E., & Munro, H. J. (1995). Growing the entrepreneurial firm: networking for international market development. *European journal of marketing*.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation–sales growth rate relationship. *Entrepreneurship theory and practice*, 30(1), 57-81.
- Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship theory and practice*, 35(5), 855-872.

- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic management journal*, 10(1), 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship theory and practice*, 16(1), 7-26.
- Covin, J. G., Slevin, D. P., & Covin, T. J. (1990). Content and performance of growth-seeking strategies: A comparison of small firms in high-and low technology industries. *Journal of Business Venturing*, 5(6), 391-412.
- Creswell, J. W. (2003). Research design: qualitative. *Quantitative, and mixed methods*.
- Creswell, J. W. (2012). Educational Research: Planing, conducting, and evaluating quantitative and qualitative research: Pearson Education.
- Criaco, G., Minola, T., Migliorini, P., & Serarols-Tarrés, C. (2014). “To have and have not”: Founders’ human capital and university start-up survival. *The Journal of Technology Transfer*, 39(4), 567-593.
- Croce, A., Martí, J., & Murtinu, S. (2013). The impact of venture capital on the productivity growth of European entrepreneurial firms: ‘Screening’ or ‘value added’ effect? *Journal of Business Venturing*, 28(4), 489-510.
- Cullen, M., Calitz, A., & Chandler, L. (2014). Business incubation in the eastern Cape: a case study. *International Journal for Innovation Education and Research*, 2(5), 76-89.
- Cumming, D. (2007). Government policy towards entrepreneurial finance: Innovation investment funds. *Journal of Business Venturing*, 22(2), 193-235.
- Cumming, D. (2008). Contracts and exits in venture capital finance. *The Review of Financial Studies*, 21(5), 1947-1982.
- Cumming, D., Deloof, M., Manigart, S., & Wright, M. (2019). New directions in entrepreneurial finance. *Journal of Banking & Finance*, 100, 252-260.

- Cumming, D., & Groh, A. P. (2018). Entrepreneurial finance: Unifying themes and future directions. *Journal of corporate finance*, 50, 538-555.
- Cumming, D., & Johan, S. (2017). The problems with and promise of entrepreneurial finance. *Strategic Entrepreneurship Journal*, 11(3), 357-370.
- Cumming, D. J., & MacIntosh, J. G. (2001). Venture capital investment duration in Canada and the United States. *Journal of Multinational Financial Management*, 11(4-5), 445-463.
- da Silva Rosa, R., Velayuthen, G., & Walter, T. (2003). The sharemarket performance of Australian venture capital-backed and non-venture capital-backed IPOs. *Pacific-Basin Finance Journal*, 11(2), 197-218.
- David, A., Saitta, S., De Caridi, G., Benedetto, F., Massara, M., Risitano, D. C., . . . Gangemi, S. (2012). Interleukin-23 serum levels in patients affected by peripheral arterial disease. *Clinical biochemistry*, 45(3), 275-278.
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of business venturing*, 22(1), 50-76.
- Deller, S. C., Conroy, T., & Markeson, B. (2018). Social capital, religion and small business activity. *Journal of Economic Behavior & Organization*, 155, 365-381.
- Denis, D. J. (2004). Entrepreneurial finance: an overview of the issues and evidence. *Journal of Corporate Finance*, 10(2), 301-326.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*: sage.
- Dhahri, S., & Omri, A. (2018). Entrepreneurship contribution to the three pillars of sustainable development: What does the evidence really say? *World Development*, 106, 64-77.
- Di Croce, L., & Helin, K. (2013). Transcriptional regulation by Polycomb group proteins. *Nature structural & molecular biology*, 20(10), 1147-1155.

- Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269-277.
- Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management science*, 35(12), 1504-1511.
- Dieterle, W. (1990). Winckler: München Vahlen Verlag.
- Dimov, D., Shepherd, D. A., & Sutcliffe, K. M. (2007). Requisite expertise, firm reputation, and status in venture capital investment allocation decisions. *Journal of Business Venturing*, 22(4), 481-502.
- Dorf, B., & Blank, S. (2018). *Startup: Manual do Empreendedor: O guia passo a passo para construir uma grande empresa*: Alta Books Editora.
- Dowling, G. (2002). Customer relationship management: in B2C markets, often less is more. *California management review*, 44(3), 87-104.
- Dushnitsky, G., Guerini, M., Piva, E., & Rossi-Lamastra, C. (2016). Crowdfunding in Europe: Determinants of platform creation across countries. *California management review*, 58(2), 44-71.
- Dzafic, Z., & Babajic, A. (2016). The role of the government in entrepreneurship development: Evidence from Bosnia and Herzegovina. *Economic Review: Journal of Economics and Business*, 14(1), 68-79.
- Ebben, J., & Johnson, A. (2006). Bootstrapping in small firms: An empirical analysis of change over time. *Journal of Business Venturing*, 21(6), 851-865.
- Edwards, J. R., & Bagozzi, R. P. (2000). On the nature and direction of relationships between constructs and measures. *Psychological methods*, 5(2), 155.

- El-Deiry, W. S., Tokino, T., Waldman, T., Oliner, J. D., Velculescu, V. E., Burrell, M., . . . Hamilton, S. R. (1995). Topological control of p21WAF1/CIP1 expression in normal and neoplastic tissues. *Cancer research*, 55(13), 2910-2919.
- Elfring, T., & Hulsink, W. (2002). Entrepreneurs, innovation and high-technology firms: the network effect. *Icfaian Journal of Management Research*, 1(5), 22-44.
- Elitzur, R., & Gaviols, A. (2003). Contracting, signaling, and moral hazard: a model of entrepreneurs, 'angels,' and venture capitalists. *Journal of Business Venturing*, 18(6), 709-725.
- Ellefson, P. V., Kilgore, M. A., Skog, K. E., & Risbrudt, C. D. (2011). Conceptual and empirical themes regarding the design of technology transfer programs: a review of wood utilization research in the United States. *International Journal of Forestry Research*, 2011.
- Ellis, P. (2000). Social ties and foreign market entry. *Journal of international business studies*, 31(3), 443-469.
- Ellis, P., & Pecotich, A. (2001). Social factors influencing export initiation in small and medium-sized enterprises. *Journal of Marketing Research*, 38(1), 119-130.
- Emery, M., & Flora, C. (2006). Spiraling-up: Mapping community transformation with community capitals framework. *Community development*, 37(1), 19-35.
- Engel, D., & Keilbach, M. (2007). Firm-level implications of early stage venture capital investment—An empirical investigation. *Journal of Empirical Finance*, 14(2), 150-167.
- Erkens, D. H., Hung, M., & Matos, P. (2012). Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide. *Journal of Corporate Finance*, 18(2), 389-411.
- Eshima, Y., & Anderson, B. S. (2017). Firm growth, adaptive capability, and entrepreneurial orientation. *Strategic management journal*, 38(3), 770-779.

- Eshun, J. P. (2009). Business incubation as strategy. *Business Strategy Series*.
- Etzkowitz, H. (2002). Incubation of incubators: innovation as a triple helix of university-industry-government networks. *Science and Public Policy*, 29(2), 115-128.
- Europea, U. (2012). Entrepreneurship determinants: culture and capabilities. *Recuperado de <http://ec.europa.eu/eurostat/documents/3217494/5748437/KS-31-12-758-EN.PDF>*.
- Farouk, S., Elanain, H. M. A., Obeidat, S. M., & Al-Nahyan, M. (2016). HRM practices and organizational performance in the UAE banking sector: The mediating role of organizational innovation. *International Journal of Productivity and Performance Management*.
- Fatoki, O. (2012). The impact of entrepreneurial orientation on access to debt finance and performance of small and medium enterprises in South Africa. *Journal of social sciences*, 32(2), 121-131.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*, 39(2), 175-191.
- Fayolle, A. (2002). *The field of entrepreneurship to the study of the entrepreneurial process: some ideas and avenues of research*. Paper presented at the 6th Francophone International Congress on SMEs, HEC, Montreal.
- Ferri, P. J., Deakins, D., & Whittam, G. (2009). The measurement of social capital in the entrepreneurial context. *Journal of Enterprising Communities: People and Places in the Global Economy*.
- Festel, G., Wuermseher, M., & Cattaneo, G. (2013). Valuation of early stage high-tech start-up companies. *International Journal of Business*, 18(3), 216.
- Fetterman, D. M. (2010). *Ethnography: step-by-step*.

- Fey, S., Emery, M., & Flora, C. (2008). Student Issues in Distance Education Programs: Do Inter-institutional Programs Offer Students More Confusion or More Opportunities? *Journal of Asynchronous Learning Networks*, 12, 71-83.
- Finlay-Robinson, D. (2013). Change and opportunity: the role of leaders and SMEs in creating new business futures. *Development and Learning in Organizations: An International Journal*.
- Fonseca, S. A., & Jabbour, C. J. C. (2012). Assessment of business incubators' green performance: A framework and its application to Brazilian cases. *Technovation*, 32(2), 122-132.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fowler Jr, F. J., & Cosenza, C. (2009). Design and evaluation of survey questions. *The SAGE handbook of applied social research methods*, 2, 375-412.
- Fraser, S., Bhaumik, S. K., & Wright, M. (2015). What do we know about entrepreneurial finance and its relationship with growth? *International Small Business Journal*, 33(1), 70-88.
- Friedman, B. A. (2011). The relationship between governance effectiveness and entrepreneurship. *International Journal of Humanities and Social Science*, 1(17), 221-225.
- Fritsch, M. (2013). New business formation and regional development—a survey and assessment of the evidence. *Found Trends Entrep* 9: 249–364.
- Frondel, M., Grösche, P., Ritter, N., Tauchmann, H., Vance, C., Matuschek, P., & Müller, U. (2011). Erhebung des Energieverbrauchs der privaten Haushalte für die Jahre 2006-2008: Teilbericht für das Projekt Erhebung des Energieverbrauchs der privaten Haushalte für die Jahre 2006-2010 (Forschungsprojekt Nr. 54/09 des Bundesministeriums für Wirtschaft und Technologie, BMWi): RWI Projektberichte.
- Fryges, H., & Wright, M. (2014). The origin of spin-offs: a typology of corporate and academic spin-offs. *Small Business Economics*, 43(2), 245-259.

- Fuentelsaz, L., González, C., Maícas, J. P., & Montero, J. (2015). How different formal institutions affect opportunity and necessity entrepreneurship. *BRQ Business Research Quarterly*, 18(4), 246-258.
- Fukuyama, F. (1995a). Social capital and the global economy. *Foreign Aff.*, 74, 89.
- Fukuyama, F. (1995b). Trust: The social virtues and the creation of prosperity. *World and I*, 10, 264-268.
- Gartner, W. B. (1988). "Who is an entrepreneur?" is the wrong question. *American journal of small business*, 12(4), 11-32.
- Geigenberger, P., Stitt, M., & Fernie, A. (2004). Metabolic control analysis and regulation of the conversion of sucrose to starch in growing potato tubers. *Plant, Cell & Environment*, 27(6), 655-673.
- George, B. A., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship theory and practice*, 35(5), 989-1024.
- Ghannajeh, A. M., AlShurideh, M., Zu'bi, M., Abuhamad, A., Rumman, G. A., Suifan, T., & Akhorshaideh, A. H. O. (2015). A qualitative analysis of product innovation in Jordan's pharmaceutical sector. *European Scientific Journal*, 11(4).
- Ghimire, B., & Abo, R. (2013). An empirical investigation of Ivorian SMEs access to bank finance: Constraining factors at demand-level. *Journal of finance and investment analysis*, 2(4), 29-55.
- Gianiodis, P. T., & Meek, W. R. (2020). Entrepreneurial education for the entrepreneurial university: a stakeholder perspective. *The Journal of Technology Transfer*, 45(4), 1167-1195.
- Giessner, S. R., Ullrich, J., & van Dick, R. (2011). Social identity and corporate mergers. *Social and Personality Psychology Compass*, 5(6), 333-345.

- Gilbert, R. J. (2006). Competition and innovation. *Journal of Industrial Organization Education*, 1(1), 1-23.
- Giorgi, A. (2009). *The descriptive phenomenological method in psychology: A modified Husserlian approach*: Duquesne University Press.
- . Global Entrepreneurship Index. (2019). World Data Atlas.
- Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship theory and practice*, 18(4), 43-62.
- Godfrey, P. C., & Hill, C. W. (1995). The problem of unobservables in strategic management research. *Strategic management journal*, 16(7), 519-533.
- Goel, R. K., Göktepe-Hultén, D., & Ram, R. (2015). Academics' entrepreneurship propensities and gender differences. *The Journal of Technology Transfer*, 40(1), 161-177.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1), 185-214.
- Gompers, P., & Lerner, J. (2001). The venture capital revolution. *Journal of economic perspectives*, 15(2), 145-168.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American journal of sociology*, 91(3), 481-510.
- Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, 33(3), 114-135.
- Grichnik, D., Brettel, M., Koropp, C., & Mauer, R. (2017). Social Entrepreneurship.
- Grimaldi, D. A., Engel, M. S., & Nascimbene, P. C. (2002). Fossiliferous Cretaceous amber from Myanmar (Burma): its rediscovery, biotic diversity, and paleontological significance. *American Museum Novitates*, 2002(3361), 1-71.

- Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: an assessment of incubating models. *Technovation*, 25(2), 111-121.
- Guerrero, M., Urbano, D., Cunningham, J., & Organ, D. (2014). Entrepreneurial universities in two European regions: A case study comparison. *The Journal of Technology Transfer*, 39(3), 415-434.
- Guerrero, M., Urbano, D., & Gajón, E. (2020). Entrepreneurial university ecosystems and graduates' career patterns: do entrepreneurship education programmes and university business incubators matter? *Journal of Management Development*.
- Gumpert, D. E. (2002). Burn your business plan. *Needham, MA: Lawson Publishing*.
- Günterberg, B., & Kayser, G. (2004). SMEs in Germany: Facts and figures 2004: IfM-Materialien.
- Gupta, P., Chauhan, S., Paul, J., & Jaiswal, M. P. (2020). Social entrepreneurship research: A review and future research agenda. *Journal of Business Research*, 113, 209-229.
- Hackett, S. M., & Dilts, D. M. (2004). A systematic review of business incubation research. *The Journal of Technology Transfer*, 29(1), 55-82.
- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Haider, S., Jabeen, S., & Ahmad, J. (2018). Moderated mediation between work life balance and employee job performance: The role of psychological wellbeing and satisfaction with coworkers. *Revista de Psicología del Trabajo y de las Organizaciones*, 34(1), 29-37.
- Hair, J. F., Anderson, R., Babin, B., & Black, W. (2010). *Multivariate data analysis: A global perspective*: Pearson Upper Saddle River: NJ.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5): Prentice hall Upper Saddle River, NJ.

- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling*: Sage.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139-152.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*.
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, *45*(5-6), 320-340.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, *40*(3), 414-433.
- Hall, R. (1992). The strategic analysis of intangible resources. *Strategic management journal*, *13*(2), 135-144.
- Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic management journal*, *14*(8), 607-618.
- Hamid, A. B. A., Baharun, R., & Hashim, N. H. (2006). Comparative analysis of managerial practices in small medium enterprises in Malaysia. *Jurnal Kemanusiaan*, *4*(2).
- Haque, N. U. (2007). *Entrepreneurship in Pakistan*: East Asian Bureau of Economic Research.
- Hatzopoulos, V., & Roma, S. (2017). Caring for sharing? The collaborative economy under EU law. *Common Market Law Review*, *54*(1).
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, *76*(4), 408-420.

- Hayter, C. S. (2016). A trajectory of early-stage spinoff success: the role of knowledge intermediaries within an entrepreneurial university ecosystem. *Small Business Economics*, 47(3), 633-656.
- He, W., Meng, T., He, X., & Ge, S. S. (2018). Unified iterative learning control for flexible structures with input constraints. *Automatica*, 96, 326-336.
- Hellmann, T., & Puri, M. (2000). The interaction between product market and financing strategy: The role of venture capital. *The review of financial studies*, 13(4), 959-984.
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods*, 17(2), 182-209.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing*: Emerald Group Publishing Limited.
- Hernández-Gantes, V. M. (1996). Fostering Entrepreneurship through Business Incubation: The Role and Prospects of Postsecondary Vocational-Technical Education. Report 2: Case Studies.
- Hisrich, R. D., & Ramadani, V. (2018). *Entrepreneurial marketing: a practical managerial approach*: Edward Elgar Publishing.
- Hitt, M. A., Dacin, M. T., Levitas, E., Arregle, J.-L., & Borza, A. (2000). Partner selection in emerging and developed market contexts: Resource-based and organizational learning perspectives. *Academy of management journal*, 43(3), 449-467.
- Hopp, C. (2010). When do venture capitalists collaborate? Evidence on the driving forces of venture capital syndication. *Small Business Economics*, 35(4), 417-431.
- Howell, S. (2020). Applications in Entrepreneurial Finance: Fintech SYLLABUS.

- Howell, S., Lerner, J., Nanda, R., & Townsend, R. R. (2020). Financial distancing: How venture capital follows the economy down and curtails innovation: National Bureau of Economic Research.
- Huang, K., Wang, K. Y., Kuo-Hisung, C., & Yien, J. (2011). Revealing the effects of entrepreneurial orientation on firm performance: A conceptual approach. *Journal of Applied Sciences*.
- Huang, L., & Zhao, X. (2018). Impact of financial development on trade-embodied carbon dioxide emissions: Evidence from 30 provinces in China. *Journal of cleaner production*, 198, 721-736.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal*, 20(2), 195-204.
- Hussein, L. A., & Baharudin, A. S. (2017). Factors affecting small and medium enterprises (SMEs) continuance intention to adopt e-commerce in Jordan. *International Journal of Advanced and Applied Sciences*, 4(4), 110-117.
- Inglehart, R. (1997). Modernization, postmodernization and changing perceptions of risk. *International Review of Sociology*, 7(3), 449-459.
- Ireland, R. D., Hitt, M. A., Camp, S. M., & Sexton, D. L. (2001). Integrating entrepreneurship and strategic management actions to create firm wealth. *Academy of Management Perspectives*, 15(1), 49-63.
- Isaac, S., & Michael, W. (1981). Statistical techniques and the analysis of data. *Handbook in Research and Evaluation*. 2nd ed. San Diego: EdITS Publishers, 196.
- Jacobs, J. (2016). *The death and life of great American cities*: Vintage.
- Jamil, F., Ismail, K., & Mahmood, N. (2015). University Incubators: A gateway to an entrepreneurial society. *Journal of Economics and Sustainable Development*, 6(6), 153-160.

- Jamil, F., Ismail, K., Mahmood, N., Khan, N. U., & Siddique, M. (2015). Technology incubators and institutional development. *Jurnal Teknologi*, 77(23).
- Janadari, M., Sri Ramalu, S., & Wei, C. (2016). Evaluation of measurement and structural model of the reflective model constructs in PLS–SEM.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of consumer research*, 30(2), 199-218.
- Jemal, A., Siegel, R., Xu, J., & Ward, E. (2010). Cancer statistics, 2010. *CA: a cancer journal for clinicians*, 60(5), 277-300.
- Jeng, L. A., & Wells, P. C. (2000). The determinants of venture capital funding: evidence across countries. *Journal of corporate Finance*, 6(3), 241-289.
- Jennings, D. F. (1994). *Multiple perspectives of entrepreneurship: Text, readings, and cases*: South-Western Pub.
- Karki, B. B. (2010). Doing business and role of government for entrepreneurship development. *Journal of Nepalese Business Studies*, 7(1), 53-62.
- Kee, D. M. H., Yusoff, Y. M., & Khin, S. (2019). The role of support on start-up success: a PLS-SEM approach. *Asian Academy of Management Journal*, 24(1), 43-59.
- Keerativutisest, V., & Promsiri, T. (2021). FINANCIAL FEASIBILITY CANVAS (FFC): EXTENDING THE BUSINESS MODEL CANVAS AS A METHOD TO TEACH FINANCIAL FEASIBILITY STUDY IN ENTREPRENEURIAL FINANCE. *Academy of Entrepreneurship Journal*, 27, 1-14.
- Keil, T., Maula, M. V., & Wilson, C. (2010). Unique resources of corporate venture capitalists as a key to entry into rigid venture capital syndication networks. *Entrepreneurship Theory and Practice*, 34(1), 83-103.

- Keppel, G. (1991). Design and analysis: A researcher's handbook.
- Kessler, H., Gehrke, M., Lautz, J., Kiick, M., Seebach, D., & Thaler, A. (1990). TOCSY-DEFT. *Biochemical Pharmacology*, 40(9), 2185-2186.
- Khan, M. A., Rathore, K., & Sial, M. A. (2020). Entrepreneurial orientation and performance of small and medium enterprises: mediating effect of entrepreneurial competencies. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 14(2), 508-528.
- Khan, M. A., Zubair, S. S., Rathore, K., Ijaz, M., Khalil, S., & Khalil, M. (2021). Impact of entrepreneurial orientation dimensions on performance of small enterprises: do entrepreneurial competencies matter? *Cogent Business & Management*, 8(1), 1943241.
- Khandwalla, P. N. (1976). The techno-economic ecology of corporate strategy. *Journal of management studies*, 13(1), 62-75.
- Khattak, M. S., Anwar, M., & Clauß, T. (2021). The role of entrepreneurial finance in corporate social responsibility and new venture performance in an emerging market. *The Journal of Entrepreneurship*, 30(2), 336-366.
- Kim, J.-H., & Wagman, L. (2016). Early-stage entrepreneurial financing: A signaling perspective. *Journal of banking & finance*, 67, 12-22.
- Kim, P. H., Aldrich, H. E., & Keister, L. A. (2006). Access (not) denied: The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economics*, 27(1), 5-22.
- Klapper, L., & Richmond, C. (2009). Patterns of business creation, survival, and growth: evidence from a developing country. *Development Research Group, World Bank, Washington, DC*.
- Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling: na.
- Klofsten, M., & Jones-Evans, D. (2000). Comparing academic entrepreneurship in Europe—the case of Sweden and Ireland. *Small Business Economics*, 14(4), 299-309.

- Klonowski, D. (2016). Venture capital and entrepreneurial growth by acquisitions: A case study from emerging markets. *The Journal of Private Equity*, 19(3), 21-29.
- Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly journal of economics*, 112(4), 1251-1288.
- Knockaert, M., Clarysse, B., & Wright, M. (2010). The extent and nature of heterogeneity of venture capital selection behaviour in new technology-based firms. *R&d Management*, 40(4), 357-371.
- Knockaert, M., Wright, M., Clarysse, B., & Lockett, A. (2010). Agency and similarity effects and the VC's attitude towards academic spin-out investing. *The Journal of Technology Transfer*, 35(6), 567-584.
- Ko, E.-J., & McKelvie, A. (2018). Signaling for more money: The roles of founders' human capital and investor prominence in resource acquisition across different stages of firm development. *Journal of Business Venturing*, 33(4), 438-454.
- Koch, L. T., Kuhn, W., Gruenhagen, M., & Hisrich, R. D. (2010). The 'irrelevance of irrelevance' in entrepreneurial finance: modeling the cost of capital in start-ups beyond Modigliani–Miller. *Strategic Change*, 19(1-2), 29-43.
- Kogut, B., & Zander, U. (1996). What firms do? Coordination, identity, and learning. *Organization science*, 7(5), 502-518.
- Kotha, R., & George, G. (2012). Friends, family, or fools: Entrepreneur experience and its implications for equity distribution and resource mobilization. *Journal of Business Venturing*, 27(5), 525-543.
- Kruger, M. E. (2005). *Creativity in the entrepreneurship domain*. University of Pretoria.
- Kumar, S., & Liu, D. (2005). Impact of globalisation on entrepreneurial enterprises in the world markets. *International Journal of Management and Enterprise Development*, 2(1), 46-64.

- Kuryan, N., Khan, M. S., & Gustafsson, V. (2018). Born globals and business incubators: a case analysis. *International Journal of Organizational Analysis*.
- Kwapisz, A. (2019). Do government and legal barriers impede entrepreneurship in the US? An exploratory study of perceived vs. actual barriers. *Journal of Business Venturing Insights*, *11*, e00114.
- Kwon, S.-W., Heflin, C., & Ruef, M. (2013). Community social capital and entrepreneurship. *American Sociological Review*, *78*(6), 980-1008.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The journal of finance*, *52*(3), 1131-1150.
- Lalkaka, R. (2000). Assessing the performance and sustainability of technology business incubators. *New Economy & Entrepreneurial Business Creation in Mediterranean Countries (International Centre for Science & High Technology, International Centre for Theoretical Physics, and Third World Academy of Sciences), Trieste, Italy*.
- Lalkaka, R. (2001). *Best practices in business incubation: Lessons (yet to be) learned*. Paper presented at the International Conference on Business Centers: Actors for Economic & Social Development. Brussels, November.
- Lalkaka, R. (2002). Technology business incubators to help build an innovation-based economy. *Journal of change management*, *3*(2), 167-176.
- Lalkaka, R. (2003). Business incubators in developing countries: characteristics and performance. *International Journal of Entrepreneurship and Innovation Management*, *3*(1-2), 31-55.
- Lalkaka, R. (2006). *Technology business incubation: a toolkit on innovation in engineering, science and technology* (Vol. 255): UNESCO.
- Lalkaka, R., & Bishop, J. (1996). Business incubators in economic development UNDP. *Washington DC*.

- Landry, R., Amara, N., & Rherrad, I. (2006). Why are some university researchers more likely to create spin-offs than others? Evidence from Canadian universities. *Research policy*, 35(10), 1599-1615.
- Lane, D. (2011). Online Statistics Education.
- Leach, J. C., & Melicher, R. W. (2011). *Entrepreneurial finance*: Nelson Education.
- Lesakova, L. (2012). The role of business incubators in supporting the SME start-up. *Acta Polytechnica Hungarica*, 9(3), 85-95.
- Li, C., Ahmed, N., Khan, S. A. Q. A., & Naz, S. (2020). Role of business incubators as a tool for entrepreneurship development: the mediating and moderating role of business start-up and government regulations. *Sustainability*, 12(5), 1822.
- Li, C., Ahmed, N., Qalati, S. A., Khan, A., & Naz, S. (2020). Role of business incubators as a tool for entrepreneurship development: the mediating and moderating role of business start-up and government regulations. *Sustainability*, 12(5), 1822.
- Lichtenstein, G. A., & Lyons, T. S. (1996). Incubating new enterprises.
- Lin, N. (2002). *Social capital: A theory of social structure and action* (Vol. 19): Cambridge university press.
- Lin, N., Ensel, W. M., & Vaughn, J. C. (1981). Social resources and strength of ties: Structural factors in occupational status attainment. *American sociological review*, 393-405.
- Lindgren, E., Tälleklint, L., & Polfeldt, T. (2000). Impact of climatic change on the northern latitude limit and population density of the disease-transmitting European tick *Ixodes ricinus*. *Environmental health perspectives*, 108(2), 119-123.
- Lippman, S. A., & Rumelt, R. P. (1982). Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *The bell journal of Economics*, 418-438.

- Loan, L., Quang, V., Tuan, D., Nghia, V., & Doanh, D. (2020). Exploring factors affecting entrepreneurial desirability among Vietnam students. *International Journal of Data and Network Science*, 4(2), 105-114.
- Lockett, A., Wright, M., & Franklin, S. (2003). Technology transfer and universities' spin-out strategies. *Small Business Economics*, 20(2), 185-200.
- Longenecker, J. G., Moore, C. W., Petty, W., & Palich, L. E. (2005). Small business management: An entrepreneurial emphasis.
- Loury, G. C. (1987). Why should we care about group inequality? *Social philosophy and policy*, 5(1), 249-271.
- Luc, P. T. (2018). The relationship between perceived access to finance and social entrepreneurship intentions among university students in Vietnam. *The Journal of Asian Finance, Economics, and Business*, 5(1), 63-72.
- Luc, P. T. (2020). Outcome expectations and social entrepreneurial intention: Integration of planned behavior and social cognitive career theory. *The Journal of Asian Finance, Economics, and Business*, 7(6), 399-407.
- Lukkarinen, A., Teich, J. E., Wallenius, H., & Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems*, 87, 26-38.
- Lukosiute, K., Jensen, S., & Tanev, S. (2019). Is joining a business incubator or accelerator always a good thing? *Technology Innovation Management Review*, 9(7), 5-15.
- Lyons, T. (1990). Birthing economic development: How effective are Michigan's incubators? East Lansing: Center for the Redevelopment of Industrialized States. *Social Science Research Bureau, Michigan State University*.
- MacKenzie, S. B., Podsakoff, P. M., & Jarvis, C. B. (2005). The problem of measurement model misspecification in behavioral and organizational research and some recommended solutions. *Journal of applied psychology*, 90(4), 710.

- Mahmood, N., Jamil, F., & Yasir, N. (2016). ROLE OF BUSINESS INCUBATORS IN ENTREPRENEURSHIP DEVELOPMENT IN PAKISTAN. *City University Research Journal*, 37-44.
- Mahmood, N., Jianfeng, C., Munir, H., & Yasir, N. (2016). Impact of Factors that Inhibit the Drive of Entrepreneurship in Pakistan: Empirical Evidence from Young Entrepreneurs and Students. *International Journal of u-and e-Service, Science and Technology*, 9(12), 163-174.
- Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic management journal*, 13(5), 363-380.
- Malki, B., Uman, T., & Pittino, D. (2020). The entrepreneurial financing of the immigrant entrepreneurs: a literature review. *Small Business Economics*, 1-29.
- Maltby, T. (2013). European Union energy policy integration: A case of European Commission policy entrepreneurship and increasing supranationalism. *Energy Policy*, 55, 435-444.
- Markova, S., & Petkovska-Mirčevska, T. (2010). Entrepreneurial finance: Angel investing as a source of funding high-growth start-up firms. *Annals of the University of Petrosani, Economics*, 10(3), 217-224.
- Mason, C. M., & Harrison, R. T. (1995). Closing the regional equity capital gap: The role of informal venture capital. *Small Business Economics*, 7(2), 153-172.
- McAdam, M., & McAdam, R. (2008). High tech start-ups in University Science Park incubators: The relationship between the start-up's lifecycle progression and use of the incubator's resources. *Technovation*, 28(5), 277-290.
- McClelland, D. C., & Mac Clelland, D. C. (1961). *Achieving society* (Vol. 92051): Simon and Schuster.
- McOliver, F. (1998). *Business Enterprises (How to start and succeed)* Benin City: Uniben Press.

- Mehmood, T., Alzoubi, H. M., Alshurideh, M., Al-Gasaymeh, A., & Ahmed. (2019). Schumpeterian entrepreneurship theory: evolution and relevance. *Academy of Entrepreneurship Journal*, 25(4), 1-10.
- Michaelas, N., Chittenden, F., & Poutziouris, P. (1999). Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data. *Small Business Economics*, 12(2), 113-130.
- Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship theory and practice*, 35(5), 873-894.
- Miller, D., & Friesen, P. H. (1986). Porter's (1980) generic strategies and performance: an empirical examination with American data: part I: testing Porter. *Organization studies*, 7(1), 37-55.
- Miller, D., & Shamsie, J. (1996). The resource-based view of the firm in two environments: The Hollywood film studios from 1936 to 1965. *Academy of management journal*, 39(3), 519-543.
- Millette, S., Hull, C. E., & Williams, E. (2020). Business incubators as effective tools for driving circular economy. *Journal of cleaner production*, 266, 121999.
- Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship: Elsevier.
- Mintzberg, H. (1973). The nature of managerial work.
- Mirhosseini, H., Tan, C. P., Hamid, N. S., & Yusof, S. (2008). Optimization of the contents of Arabic gum, xanthan gum and orange oil affecting turbidity, average particle size, polydispersity index and density in orange beverage emulsion. *Food hydrocolloids*, 22(7), 1212-1223.
- Mishra, C. S., & Zachary, R. K. (2015). The theory of entrepreneurship. *Entrepreneurship research journal*, 5(4), 251-268.

- Mitter, C., & Kraus, S. (2011). Entrepreneurial finance—issues and evidence, revisited. *International Journal of Entrepreneurship and Innovation Management*, 14(2-3), 132-150.
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1-16.
- Mort, G. S., & Weerawardena, J. (2006). Networking capability and international entrepreneurship: How networks function in Australian born global firms. *International Marketing Review*.
- Mosakowski, E. (1998). Managerial prescriptions under the resource-based view of strategy: the example of motivational techniques. *Strategic management journal*, 19(12), 1169-1182.
- Mosey, S., & Wright, M. (2007). From human capital to social capital: A longitudinal study of technology-based academic entrepreneurs. *Entrepreneurship Theory and Practice*, 31(6), 909-935.
- Moustakas, C. (1994). *Phenomenological research methods*: Sage publications.
- Muhammad, N., McElwee, G., & Dana, L.-P. (2017). Barriers to the development and progress of entrepreneurship in rural Pakistan. *International Journal of Entrepreneurial Behavior & Research*.
- Mukiri, W. G. (2011). Determinants of access to Bank credit by micro and small enterprises in Kenya. *Beacon Consultant Service*.
- Mumtaz, S., Shafi, F., & Zafar, F. (2017). Role of technology business incubators to nurture entrepreneurship: a study on Pakistani universities. *Journal of Account Marketing*, 6, 226.
- Munari, F., & Toschi, L. (2015). Assessing the impact of public venture capital programmes in the United Kingdom: Do regional characteristics matter? *Journal of Business Venturing*, 30(2), 205-226.

- Mustapha, A., & Tlaty, J. (2018). The entrepreneurial finance and the issue of funding startup companies. *European Scientific Journal*, 14(13), 268-279.
- Mustar, P., Renault, M., Colombo, M. G., Piva, E., Fontes, M., Lockett, A., . . . Moray, N. (2006). Conceptualising the heterogeneity of research-based spin-offs: A multi-dimensional taxonomy. *Research policy*, 35(2), 289-308.
- Myint, Y. M., Vyakarnam, S., & Huener, A. (2019). Serial entrepreneurs as ‘incubators’: Individuals with inspiration and leadership that make for incubation *Research Handbook of International Talent Management*: Edward Elgar Publishing.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management Review*, 23(2), 242-266.
- Naudé, W. (2008). Entrepreneurship in economic development.
- Neeley, L., & Van Auken, H. (2010). DIFFERENCES BETWEEN FEMALE AND MALE ENTREPRENEURS'USE OF BOOTSTRAP FINANCING. *Journal of Developmental Entrepreneurship*, 15(01), 19-34.
- Neuman, S. B., & McCormick, S. (1995). *Single-subject experimental research: Applications for literacy*: ERIC.
- Neumeyer, X., Santos, S. C., Caetano, A., & Kalbfleisch, P. (2019). Entrepreneurship ecosystems and women entrepreneurs: a social capital and network approach. *Small Business Economics*, 53(2), 475-489.
- Nguyen, M.-H., Pham, T.-H., Ho, M.-T., Nguyen, H. T. T., & Vuong, Q.-H. (2021). On the social and conceptual structure of the 50-year research landscape in entrepreneurial finance. *SN Business & Economics*, 1(1), 1-29.
- Njau, J. M., Wachira, A. W., & Mwenda, L. K. M. (2019). Effect of access to networks support provided by business incubators on technology based new venture creation in Kenya.

- O'Boyle, E. J. (2017). Schumpeter and economic man. *International Journal of Social Economics*.
- OECD. (2017). *Entrepreneurship at a glance 2017*: OECD.
- Oni, E. O., & Daniya, A. (2012). Development of small and medium scale enterprises: The role of government and other financial institutions. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 1(7).
- Osman, I., CF, T. H., & Galang, M. C. (2011). Are human resource departments really important? An empirical study on Malaysian small and medium enterprises (SMEs) in the service sector. *International Journal of Business and Management*, 6(2), 147.
- Pals, S. (2006). Factors determining success/failure in business incubators: A literature review of 17 countries. *Worcester Polytechnic Institute*, 2-81.
- Paré, J.-L., Rédis, J., & Sahut, J.-M. (2009). The Development of Entrepreneurial Finance Research. *International Journal of Business*, 14(4).
- Parker, S. C. (2018). *The economics of entrepreneurship*: Cambridge University Press.
- Paxton, P. (1999). Is social capital declining in the United States? A multiple indicator assessment. *American journal of sociology*, 105(1), 88-127.
- Pearce, J., Grafman, L., Colledge, T., & Legg, R. (2019). Leveraging information technology, social entrepreneurship, and global collaboration for just sustainable development.
- Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary educational psychology*, 36(1), 36-48.
- Penrose. (2009). *The Theory of the Growth of the Firm*: Oxford university press.
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*: Oxford university press.

- Penrose, E. T. (1959). The theory of the growth of the firm.
- Peters, T. (1997). The circle of innovation, edit A: Knopf, NY.
- Peters, T., Rice, M., & Sundararajan, M. (2004). The role of incubators in the entrepreneurial process. *The Journal of Technology Transfer*, 29(1), 83-91.
- Pettersen, I. B., Aarstad, J., Høvig, Ø. S., & Tobiassen, A. E. (2015). Business incubation and the network resources of start-ups. *Journal of Innovation and Entrepreneurship*, 5(1), 1-17.
- Pineda, C., Amezcua-Guerra, L. M., Solano, C., Rodriguez-Henríquez, P., Hernández-Díaz, C., Vargas, A., . . . Gutiérrez, M. (2011). Joint and tendon subclinical involvement suggestive of gouty arthritis in asymptomatic hyperuricemia: an ultrasound controlled study. *Arthritis research & therapy*, 13(1), 1-7.
- Polo-García-Ochoa, C., De Pablos Heredero, C., & Blanco Jiménez, F. J. (2020). How business accelerators impact startup's performance: Empirical insights from the dynamic capabilities approach. *Intangible Capital*, 16(3), 107-125.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual review of sociology*, 24(1), 1-24.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3), 879-891.
- Pryor, F. L. (2002). Quantitative notes on the extent of governmental regulations in various OECD nations. *International Journal of Industrial Organization*, 20(5), 693-714.

- Puche, B., Braun, R., & Achleitner, A. K. (2015). International evidence on value creation in private equity transactions. *Journal of Applied Corporate Finance*.
- Putnam, R. (1993). The prosperous community: Social capital and public life. *The american prospect*, 13(Spring), Vol. 4. Available online: <http://www.prospect.org/print/vol/13> (accessed 7 April 2003).
- Putnam, R. (1995). Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6, 65-78.
- Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *PS: Political science & politics*, 28(4), 664-683.
- Putnam, R. D. (2000). Bowling alone: America's declining social capital *Culture and politics* (pp. 223-234): Springer.
- Qi, X.-L., & Zhang, S.-C. (2011). Topological insulators and superconductors. *Reviews of Modern Physics*, 83(4), 1057.
- Ratinho, T., & Henriques, E. (2010). The role of science parks and business incubators in converging countries: Evidence from Portugal. *Technovation*, 30(4), 278-290.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761-787.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: Cumulative empirical evidence.
- Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of research in Marketing*, 26(4), 332-344.
- Riessman, C. K. (2008). *Narrative methods for the human sciences*: Sage.

- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's comments: a critical look at the use of PLS-SEM in "MIS Quarterly". *MIS quarterly*, iii-xiv.
- Rita, M. R., & Muharam, H. (2018). Entrepreneurial finance perspective: Highlighting from the supply side. *Jurnal Keuangan dan Perbankan*, 22(3), 267396.
- Robb, A. M., & Robinson, D. T. (2014). The capital structure decisions of new firms. *The Review of Financial Studies*, 27(1), 153-179.
- Roscoe, A. M., Lang, D., & Sheth, J. N. (1975). Follow-up Methods, Questionnaire Length, and Market Differences in Mail Surveys: In this experimental test, a telephone reminder produced the best response rate and questionnaire length had no effect on rate of return. *Journal of Marketing*, 39(2), 20-27.
- Rosenbusch, N., Brinckmann, J., & Müller, V. (2013). Does acquiring venture capital pay off for the funded firms? A meta-analysis on the relationship between venture capital investment and funded firm financial performance. *Journal of Business Venturing*, 28(3), 335-353.
- Rosenbusch, N., Rauch, A., & Bausch, A. (2013). The mediating role of entrepreneurial orientation in the task environment–performance relationship: A meta-analysis. *Journal of management*, 39(3), 633-659.
- Roski, F. (2012). *Entrepreneurial Finance Management in the German Service Sector: Financial Management as a Pragmatic Implementation Approach for the Easing of the Capital Scarcity of Young Service Enterprises in Germany*: University of Surrey (United Kingdom).
- Rossi, M. (2014). Capital budgeting in Europe: confronting theory with practice. *International Journal of Managerial and Financial Accounting*, 6(4), 341-356.
- Roxas, H. B., Lindsay, V., Ashill, N., & Victorio, A. (2008). Institutional analysis of strategic choice of micro, small, and medium enterprises: Development of a conceptual framework. *Singapore Management Review*, 30(2), 47-72.

- Saavedra, A., Kotey, B., & Sandhu, K. (2020). The Digital Value Propositions for Virtual Business Incubators *Digital Innovations for Customer Engagement, Management, and Organizational Improvement* (pp. 1-19): IGI Global.
- Saberi, M., & Hamdan, A. (2019). The moderating role of governmental support in the relationship between entrepreneurship and economic growth. *Journal of Entrepreneurship in Emerging Economies*.
- Sahban, M., Kumar, D., & Liba, S. (2014). Instrument development of business incubation center. *International Journal of Applied Business and Economic Research*, 12(3), 729-757.
- Salem, M. I. (2014). The role of business incubators in the economic development of Saudi Arabia. *International Business & Economics Research Journal (IBER)*, 13(4), 853-860.
- Samila, S., & Sorenson, O. (2017). Community and capital in entrepreneurship and economic growth. *American Sociological Review*, 82(4), 770-795.
- Sapienza, H. J. (1992). When do venture capitalists add value? *Journal of Business Venturing*, 7(1), 9-27.
- Sapienza, H. J., De Clercq, D., & Sandberg, W. R. (2005). Antecedents of international and domestic learning effort. *Journal of business venturing*, 20(4), 437-457.
- Sarairoh, S. A. M. (2021). The Role of Business Incubators in the Economic Development and Creativity in Jordanian Universities: Evidence from Mutah University. *Academic Journal of Interdisciplinary Studies*, 10(1), 266-266.
- Scholten, V., Omta, O., Kemp, R., & Elfring, T. (2015). Bridging ties and the role of research and start-up experience on the early growth of Dutch academic spin-offs. *Technovation*, 45, 40-51.
- Schumpeter, J. A. (1949). *Economic Theory and Entrepreneurial History in Essays on Entrepreneurs, Innovations, Business Cycles and the Evolution of Capitalism*, Clemence RV (1989): Transaction Publishers, New Brunswick and London.

- Schwartz, M., & Hornych, C. (2010). Cooperation patterns of incubator firms and the impact of incubator specialization: Empirical evidence from Germany. *Technovation*, 30(9-10), 485-495.
- Scott, J. M., & Hussain, J. (2019). Exploring intersectionality issues in entrepreneurial finance: Policy responses and future research directions. *Strategic Change*, 28(1), 37-45.
- Seghers, A., Manigart, S., & Vanacker, T. (2012). The impact of human and social capital on entrepreneurs' knowledge of finance alternatives. *Journal of Small Business Management*, 50(1), 63-86.
- Sekaran, U., & Bougie, R. (2003). *Research Methods For Business, A Skill Building Approach*, John Willey & Sons. Inc. New York.
- Setyawati, I., Purnomo, A., Irawan, D. E., Tamyiz, M., & Sutiksno, D. U. (2018). A visual trend of literature on ecopreneurship research overviewed within the last two decades. *Journal of Entrepreneurship Education*, 21(4), 1-7.
- Shahzad, A., Ali, R., & Khan, M. (2012). On the exact solution for axisymmetric flow and heat transfer over a nonlinear radially stretching sheet. *Chinese Physics Letters*, 29(8), 084705.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management Review*, 25(1), 217-226.
- Shapiro, J. S. (1999). Loneliness: Paradox or artifact?
- Sheuner, D., Eckman, C., Jensen, M., Song, X., Citron, M., Suzuki, N., . . . Kukull, W. (1996). Secreted amyloid beta-protein similar to that in the senile plaques of Alzheimer's disease is increased in vivo by the presenilin 1 and 2 and APP mutations linked to familial Alzheimer's disease. *Nature Med*, 2, 864-870.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological methods*, 7(4), 422.

- Sidek, S., Mohamad, M. R., & Nasir, W. (2016a). Entrepreneurial orientation access to finance and business performance: a preliminary analysis. *International Journal of Academic Research in Business and Social Sciences*, 6(11), 692-707.
- Sidek, S., Mohamad, M. R., & Nasir, W. (2016b). Entrepreneurial orientation, access to finance and business performance: a preliminary analysis. *International Journal of Academic Research in Business and Social Sciences*, 6(11), 692-707.
- Sieber, S. D. (1973). The integration of fieldwork and survey methods. *American journal of sociology*, 78(6), 1335-1359.
- Sirén, C., Hakala, H., Wincent, J., & Grichnik, D. (2017). Breaking the routines: Entrepreneurial orientation, strategic learning, firm size, and age. *Long Range Planning*, 50(2), 145-167.
- Small, M. L. (2009). How many cases do I need?' On science and the logic of case selection in field-based research. *Ethnography*, 10(1), 5-38.
- Smallbone, D., & Welter, F. (2010). Entrepreneurship and government policy in former Soviet republics: Belarus and Estonia compared. *Environment and Planning C: Government and Policy*, 28(2), 195-210.
- Soetanto, D. P., & Jack, S. L. (2013). Business incubators and the networks of technology-based firms. *The Journal of Technology Transfer*, 38(4), 432-453.
- Sohail, M. S., & Hoong, T. B. (2003). TQM practices and organizational performances of SMEs in Malaysia: Some empirical observations. *Benchmarking: An International Journal*.
- Somsuk, N., & Laosirihongthong, T. (2014). A fuzzy AHP to prioritize enabling factors for strategic management of university business incubators: Resource-based view. *Technological forecasting and social change*, 85, 198-210.
- Ssekiziyivu, B., Mwesigwa, R., Kabahinda, E., Lakareber, S., & Nakajubi, F. (2021). Strengthening business incubation practices among startup firms. Evidence from Ugandan

- communities. *Journal of Enterprising Communities: People and Places in the Global Economy*.
- Stagno, S., Reynolds, D. W., Huang, E.-S., Thames, S. D., Smith, R. J., & Alford Jr, C. A. (1977). Congenital cytomegalovirus infection: occurrence in an immune population. *New England journal of medicine*, 296(22), 1254-1258.
- Stake, R. E. (1995). *The art of case study research*: sage.
- Stam, C. J. (2014). Modern network science of neurological disorders. *Nature Reviews Neuroscience*, 15(10), 683-695.
- Stam, W., Arzlanian, S., & Elfring, T. (2014). Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators. *Journal of Business Venturing*, 29(1), 152-173.
- Štefko, R., Fedorko, R., Svetozarovová, N., & Nastišin, L. (2021). Start-up Management and the Relationship between the Level of Awareness among Potential Young Entrepreneurs and the Motivation to Start Own Business. *Quality-Access to Success*, 22(183).
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*: Citeseer.
- Subrahmanian, V. S., Bonatti, P., Dix, J., Eiter, T., Kraus, S., Ross, R., . . . Dix, J. (2000). *Heterogeneous agent systems*: MIT press.
- Tang, J., Tang, Z., Marino, L. D., Zhang, Y., & Li, Q. (2008). Exploring an inverted U-shape relationship between entrepreneurial orientation and performance in Chinese ventures. *Entrepreneurship theory and practice*, 32(1), 219-239.
- Tang, Q., Zhang, X., Yang, X., & Francis, J. A. (2013). Cold winter extremes in northern continents linked to Arctic sea ice loss. *Environmental research letters*, 8(1), 014036.
- Taylor, J. B. (2009). The financial crisis and the policy responses: An empirical analysis of what went wrong: National Bureau of Economic Research.

- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, 18(7), 509-533.
- Terungwa, A. (2011). An empirical evaluation of small and medium enterprises equity investment scheme in Nigeria. *Journal of Accounting and taxation*, 3(3), 79-90.
- Theodorakopoulos, N., Kakabadse, N. K., & McGowan, C. (2014). What matters in business incubation? A literature review and a suggestion for situated theorising. *Journal of Small Business and Enterprise Development*.
- Thies, F., Wessel, M., & Benlian, A. (2016). Effects of social interaction dynamics on platforms. *Journal of Management Information Systems*, 33(3), 843-873.
- Torkkeli, L., Kuivalainen, O., Saarenketo, S., & Puumalainen, K. (2019). Institutional environment and network competence in successful SME internationalisation. *International Marketing Review*.
- Twigg, S. R., Lloyd, D., Jenkins, D., Elçioglu, N. E., Cooper, C. D., Al-Sannaa, N., . . . Knight, S. J. (2012). Mutations in multidomain protein MEGF8 identify a Carpenter syndrome subtype associated with defective lateralization. *The American Journal of Human Genetics*, 91(5), 897-905.
- Umaru, D., & Obeleagu-Nzelibe, C. (2014). *Entrepreneurship skills and profitability of small and medium enterprises (SMES): resource acquisition strategies for new ventures in Nigeria*. Paper presented at the Proceeding of 25th International Business Research Conference.
- Urbano, D., & Guerrero, M. (2013). Entrepreneurial universities: Socioeconomic impacts of academic entrepreneurship in a European region. *Economic development quarterly*, 27(1), 40-55.
- Urim, U., & Imhonopi, D. (2015). Operationalising financing windows for entrepreneurship development in Nigeria: An appraisal. *Research Journal of Finance and Accounting*, 6(15).

- Vaisar, T., Pennathur, S., Green, P. S., Gharib, S. A., Hoofnagle, A. N., Cheung, M. C., . . . Singh, P. (2007). Shotgun proteomics implicates protease inhibition and complement activation in the antiinflammatory properties of HDL. *The Journal of clinical investigation*, *117*(3), 746-756.
- Van Praag, C. M., & Versloot, P. T. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, *29*(4), 351-382.
- Van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, *28*(2), 171-186.
- Venkataraman, S., Katz, J., & Brockhaus, R. (1997). Advances in entrepreneurship, firm emergence, and growth. *J. Katz & R. Brockhaus (Eds.)*, 119-138.
- Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, *46*(4), 579-590.
- Vuong, Q.-H., Nguyen, H. T. T., Pham, T.-H., Ho, M.-T., & Nguyen, M.-H. (2021). Assessing the ideological homogeneity in entrepreneurial finance research by highly cited publications. *Humanities and Social Sciences Communications*, *8*(1), 1-11.
- Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, *21*(4), 541-567.
- Wang, D., & Schøtt, T. (2020). Coupling between financing and innovation in a startup: embedded in networks with investors and researchers. *International Entrepreneurship and Management Journal*, 1-21.
- Watson, D., Clark, L. A., Weber, K., Assenheimer, J. S., Strauss, M. E., & McCormick, R. A. (1995). Testing a tripartite model: II. Exploring the symptom structure of anxiety and depression in student, adult, and patient samples. *Journal of abnormal Psychology*, *104*(1), 15.

- Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Beagley, J., Belesova, K., . . . Campbell-Lendrum, D. (2021). The 2020 report of the Lancet Countdown on health and climate change: responding to converging crises. *The Lancet*, 397(10269), 129-170.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation—performance relationship. *Entrepreneurship Theory and Practice*, 24(1), 37-48.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic management journal*, 24(13), 1307-1314.
- Wolcott, H. (2008). *Ethnography: A way of seeing*. 2: nd ed. Walnut Creek, CA: AltaMira.
- Wong, K. K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.
- Wonglimpiyarat, J. (2014a). Competition and challenges of mobile banking: A systematic review of major bank models in the Thai banking industry. *The Journal of High Technology Management Research*, 25(2), 123-131.
- Wonglimpiyarat, J. (2014b). Incubator policy to support entrepreneurial development, technology transfer and commercialization. *World Journal of Entrepreneurship, Management and Sustainable Development*.
- Wright, J. W., Davies, K. F., Lau, J. A., McCall, A. C., & McKay, J. K. (2006). Experimental verification of ecological niche modeling in a heterogeneous environment. *Ecology*, 87(10), 2433-2439.
- Wright Robbie, M., Ken. (1998). Venture capital and private equity: A review and synthesis. *Journal of Business Finance & Accounting*, 25(5-6), 521-570.

- Wu, W., Si, S., & Wu, X. (2016). Entrepreneurial finance and innovation: Informal debt as an empirical case. *Strategic Entrepreneurship Journal*, 10(3), 257-273.
- Wu, W., Wang, H., & Tsai, F.-S. (2020). Incubator networks and new venture performance: the roles of entrepreneurial orientation and environmental dynamism. *Journal of Small Business and Enterprise Development*.
- Wulan, V. R., & Hermanto, A. (2019). Sociopreneurship Business Incubator Design Based On Information Technology As an Innovative Solution for Enhancing Community Welfare. *IJEED International Journal Of Entrepreneurship And Business Development eISSN 2597-4785 pISSN 2597-4750*, 2(2), 240-254.
- Xu, P., Zeng, G. M., Huang, D. L., Feng, C. L., Hu, S., Zhao, M. H., . . . Xie, G. X. (2012). Use of iron oxide nanomaterials in wastewater treatment: a review. *Science of the Total Environment*, 424, 1-10.
- Xue, L., Gu, R., Wang, T., Wang, X., Saunders, S., Blake, D., . . . Xu, Z. (2016). Oxidative capacity and radical chemistry in the polluted atmosphere of Hong Kong and Pearl River Delta region: analysis of a severe photochemical smog episode. *Atmospheric Chemistry and Physics*, 16(15), 9891-9903.
- Yang, L., & Wall, G. (2008). Ethnic tourism and entrepreneurship: Xishuangbanna, yunnan, china. *Tourism Geographies*, 10(4), 522-544.
- Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5): sage.
- Yin, R. K. (2011). *Applications of case study research*: sage.
- Yli-Renko, H., Autio, E., & Sapienza, H. J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic management journal*, 22(6-7), 587-613.

- Yusubova, A., Andries, P., & Clarysse, B. (2019). The role of incubators in overcoming technology ventures' resource gaps at different development stages. *R&D Management*, 49(5), 803-818.
- Zakaria, N., Zainal, S. R. M., & Nasurdin, A. M. (2011). Investigating the role of human resource management practices on the performance of SME: A conceptual framework. *Journal of global management*, 3(1), 74-92.
- Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, 37(2), 197-206.
- Zreen, A., Farrukh, M., Nazar, N., & Khalid, R. (2019). The role of internship and business incubation programs in forming entrepreneurial intentions: an empirical analysis from Pakistan. *Central European Management Journal*, 27(2), 97-113.
- Zubair, D. S. S., & Khan, M. A. (2021). Orientation of Youth towards Social Entrepreneurship: An Empirical Study from Pakistan. *Orientation of Youth towards Social Entrepreneurship: An Empirical Study in Pakistan*, 8(9), 67-77.
- Lilai, Xu. (2009). Business Incubators in China. *Management Research Review*, Vol 35 (1), 90-99