

Organizational Resources and Internationalization of Born-global SMEs: Empirical Evidence from Pakistan

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Thesis submitted to the Lahore School of Economics in partial fulfillment of the requirements for
the degree of
MPhil in Business Administration
2019.

Word count = 25,324

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Declaration

I declare that this thesis was composed by myself, that the work contained herein is my own except where explicitly stated otherwise in the text, and that this work has not been submitted for any other degree or professional qualification.

Acknowledgment

It would have been impossible for me to complete this thesis without the help and support of many important people in my life.

I am highly indebted and thankful to my supervisor, Dr. Zahid Riaz for his untiring efforts and guidance to shape and refine this research and for encouraging me to always aim higher.

I would like to thank Lahore School of Economics and Dr. Shahid Amjad Chaudhary for funding the MPhil program and providing me with the opportunity to pursue higher education. I am thankful to Dr. Sohail Zafar for his valuable advice and guidance for strengthening the data analysis section of this thesis. Also, my heartfelt thanks to Ms. Romana Noor, Ms. Sadia Tariq and Ms. Fatima Syed for the support and assistance that they have provided me during my course work and thesis.

The support of my colleagues and friends, Maira Habib and Ali Taimur has been vital in completion of this thesis. They have made my journey enjoyable and I will always be grateful to them.

I would like to express my deepest gratitude to my family, my father, M.Sadiq Tuafil, mother, Qurratul-Ain, mother in law, Zahida Naseer and aunt, Shahida Habib who have always encouraged, supported and prayed for me. Their wisdom, generosity and values have always been a source of inspiration and guidance for me.

My heartfelt thanks to my husband, Nouman Naseer, who gave me the idea to study the ICT sector and for his constant support during the data collection and writing process of my thesis. I can never thank him enough for his patience, trust and faith in me.

Lastly, I would like to thank and dedicate this thesis to my late grandfather, Dr. M. Zafar Khan, whose life struggles to acquire education and to educate those around him have been truly inspirational. He has always been my source of motivation and strength.

Abstract

This thesis explores the role of human capital for early internationalization of SMEs also known as born-global firms. Drawing from the resource-based view and network theory, a conceptual model is proposed. This model conceptualizes that internal (human capital and learning orientation) and external (foreign alliances) resources facilitate the early and rapid internationalization of born global SMEs especially in the context of a developing economy – Pakistan. The hypotheses of the proposed model were empirically tested on a sample of 112 born-global SMEs of the ICT sector of Pakistan. The findings of this research have demonstrated that the integration of RBV and network theory can be used to illustrate the internationalization of born global SMEs. The indirect role of learning orientation in facilitating a positive relationship between human capital and internationalization of born global firms in the presence of a higher number of foreign alliances is examined. For the managers of born-global SMEs, it is imperative to develop its human capital for its rapid internationalization. Likewise, the development of human capital can assist firms to strengthen their learning orientation through better networking in the form of foreign alliances in international markets. Hence, this study provides a holistic view of *how* and *when* the juxtaposition of internal and external resources paves the way for internationalization of born global SMEs.

Keywords: Born-global firms, Human capital, Learning orientation, Foreign alliances, and Pakistan

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Chapter One: Introduction

1.1 Research Overview

Advancement of information technology as one of the key drivers of globalization has empowered the (SMEs) from emerging economies, which are resource-constrained and face vulnerability for their global expansion (Li et al., 2018; Fahalat et al., 2018; Love & Roper, 2015; Haase & Franco, 2011; McDougall & Oviatt, 2000). SMEs can utilize their limited resources such as technological capabilities, learning capabilities, social capital, market skills and intellectual resources to access international markets (Li et al., 2018; Paul et al., 2017; Knight & Liesch, 2016; Castro & Roldán, 2013; Acquaah, 2007). As the flow of transport, information, goods/services and finances across national borders has become easier, the transition of small firm towards international markets has become easier (Fletcher, 2004).

The new trade theory of neoclassical economics posits that resource based advantages such as low wages and endowments of other factor(s) can assist emerging market firms to internationalize (Deraniyagala & Fine, 2001; Krugman, 1997; Barney, 1991). On the other hand, the firms of developing economies suffer from certain disadvantages including physical and financial infrastructure along with inefficient factor inputs and poor physical and informational infrastructure (Li & Kozhikode, 2008).

This study postulates that most of the emerging market firms of the developing economies like Pakistan engage in proactive pursuit of internationalization since the day of their existence (Khan & Lew, 2018). Smaller domestic markets, institutional constraints, political instability and urge for geographic diversification compel firms of developing economies to operate in foreign markets (Li et al., 2018; Fahalat et al., 2018; Korsakienė & Tvaronavičienė, 2012; Knight & Cavusgil, 2004). Extant literature shows that the urge of firms to rapidly internationalize in current times is not constrained by liabilities of foreignness, larger domestic market base, and huge capital requirements. These shortcomings can be overcome by marketing skills, technological capabilities, human capital, innovative

competencies and partnering skills (Paul et al., 2017; Sui & Baum, 2014; Javalgi & Todd, 2011; Knight & Cavusgil, 2004).

The above-mentioned aspects are quite prevalent in the case of the SMEs of information and communication technology (ICT) sector of Pakistan (Khan & Lew, 2018). These ICT firms tend to aggressively seek business in foreign markets and most of them do so at the time of their inception pertaining to the smaller local market, weaker infrastructure, geopolitical tensions, and institutional uncertainty (Khan & Lew, 2018; Contractor & Kundu, 2004). These young entrepreneurial organizations intently pursue business opportunities in global markets and currently populate the ICT business scene of Pakistan, with services ranging from software and hardware consultancy, call center services, export of computer software¹ (PSEB, 2017). Firms that pursue a very proactive globalization agenda since their inception are referred as *born-global* firms (Knight & Liesch, 2016; Cavusgil & Knight 2015; Madsen & Servais, 1997; Rennie, 1993) and usually the SMEs of the ICT sector represent these types of firms.

This study proposes three different types of intangible firm resources, namely: human capital; learning orientation; and social networks (in the form of foreign alliances) possessed by the firm (Barney, 1991), which can contribute to its internationalization. Human capital is regarded as a vital resource for a firm to attain competitive advantage, probably because it is one of the most valuable and inimitable resources as it is accumulated over time due to the learning, education, training and experiences of employees (Youndt & Snell, 2004; Grant 1996; 1995; Kogut & Zander, 1992; Barney, 1991). Learning orientation is acknowledged by literature as a superior resource compared to other resources of the firm, because of its ability to ease firm's access to market information, learning from that information and following a due course to subsequently take actions, which in essence, helps to maintain competitive advantage of the firm (Baker & Sinkula, 1999; March, 1991).

Achieving competitive advantage cannot only be attributed to internal resources of the firm but to

¹ For details, check Table 1.1: Categorization of IT and ITeS companies by PSEB in Appendix B

shared external resources and capabilities of a network as well, thus foreign alliances are considered to have their share of contributions in this regard (Braga et al., 2016; Brouthers et al., 2015). Due to partnerships and network relations firms can access new knowledge without precisely having to go through all of the experiences of partner firms (Saarenketo et al., 2004).

These resources of the firms help them to accumulate and distribute knowledge in many different ways. For instance, human capital deals at the individual level, learning orientation disseminates knowledge through organizational structures, processes or routines, and social capital dispenses information and knowledge through the relationships, alliances and networks firms develop in foreign markets (Subramaniam & Youndt, 2005). There are numerous ways for born-global firms to learn apart from learning “by doing,” such as imitating other successful firms, building network relationships, or simply through recruiting skilled employees (Saarenketo et al., 2004). The knowledge and learning of the firm are crucial for its internationalization (Autio et al., 2000). Hence, the effectiveness of the impact of human capital on internationalization is contingent upon the pivotal role that learning orientation carries within the organizations as well as on the external support brought in through foreign alliances.

1.2 Born global SMEs

Born-global firms are not new, as they have existed for a long time especially, in countries where the domestic markets are small (Cavusgil & Knight, 2009). Formally originating in the 1980s, there are several streams of work in international entrepreneurship that gradually introduced and advanced the idea of born-global internationalization (Knight & Liesch, 2016; Knight, 2015; Gerschewski et al., 2015; Gassmann & Keupp, 2007; McDougall et al., 1994). In the 1990s, foundational literature of born-global firms surfaced. Rennie, (1993) formally introduced the notion of ‘born global’ in his research on Australian exporting firms to identify the firms that had ventured into international markets at or soon after their inception. In the past few decades, the born global firms have emerged in sizable numbers worldwide (Knight & Liesch, 2016). Several factors have facilitated this trend such as globalization, the technological advancements, the Internet, and other communication innovations including the transfer of

capital (Knight, 2015; Knight & Cavusgil, 2004). These advancements facilitated born-global firms by making foreign trade less costly and more importantly, enable them to internationalize at or soon after their inception (Cavusgil & Knight, 2009).

Knight and Cavusgil, (2004, p. 124) explained born-globals as “entrepreneurial start-ups that from or near their founding, seek to derive a substantial proportion of their revenue from the sale of products in international markets.” Literature has defined two basic characteristics of born global firms: 1) they internationalization within 3 years of their inception; and 2) they must generate 25% of their revenue from international markets (Knight & Liesch, 2016; Cavusgil & Knight, 2015). The notion of born-global SME internationalization has been associated with another emerging realm of ‘international entrepreneurship’, which discusses about the creation and exploitation of potential opportunities in foreign markets in order to attain competitive advantage over rivals (McDougall & Oviatt, 2000). In the past two decades, born-global firms have been at the center of attention of researchers due to their immense contribution in the economic development of their home countries, transfer of knowledge, and growth of commerce and investment globally (Eurofound, 2012).

It is imperative to note that born global firms are currently expanding their profitable businesses in the global arena (Knight & Liesch, 2016) because rapid internationalization can occur in a number of industries including food and beverages, manufacturing, furniture, services, plastics, and chemicals (Falahat et al., 2018). Though born global firms may achieve success in foreign markets but a lot of them fail in the process, hence there is a dire need to understand the factors that facilitate internationalization (Paul et al., 2017; Gassmann & Keupp, 2007; Oviatt & McDougall, 1994).

Born global SMEs of ICT sector present an interesting research context to explore, as it is a relatively new and young industry with typically small firms that hold a significant promise to internationalize (Cahen et al., 2016). Second, it is a source of knowledge-based employment, technological change, as well as innovation and behaves differently from late internationalizing firms (Autio et al., 2000). A lot of traction has been generated by the global ICT industry in recent past, as it has emerged as one of the

rapidly growing sectors in the world and is expecting 4% growth in 2019 (Comptia, 2019). Also, the ICT sector of Pakistan is experiencing positive growth (3.5% expected annual growth rate) and has generated \$939 million through global sales in the year 2016- 2017² (PSEB, 2019; 2018). The ICT industry contributes about 14% to the GDP of Pakistan (PASHA, 2018). These statistics illustrate the importance of the Pakistani ICT sector regarding the generation of foreign remittances, job creation and economic growth of the Pakistani economy and thereby validating the contextual relevance of this sector for this thesis. What is more, the domestic market environment of Pakistan like other developing economies is unfavorable for the ICT sector due to smaller domestic market, weaker infrastructure, and limited financial and legal supports from state institutions (Khan & Lew, 2018). As per the Table 2B of the Appendix 2, it is imperative to reiterate that the ICT sector firms of Pakistan offer services in the international markets and positively contribute towards the foreign trade. Therefore, in this context of a developing economy of Pakistan, it has become important to examine the factors that contribute and facilitate the proactive nature of internationalization of SMEs of the ICT sector.

1.3 Research Question and Objectives

The empirical literature aimed at revealing the actual bundles of resources and capabilities that make SMEs internationalize early is limited (Knight, 2015; Gassmann & Keupp, 2007; Knight & Cavusgil, 2004). It is being postulated that a firm has unique resources that provides a sustainable competitive advantage over its rivals. As per the notion of resource-based view (RBV), it has been argued that human capital, learning orientation and foreign alliances are characterized as capabilities of the firm that are valuable, unique, rare and inimitable (Paul et al., 2017; Youndt & Snell, 2004; Hult & Ketchen, 2001; Barney, 1991). Taken together, these capabilities of the firm form the basis of its competitive advantage in its desired markets. The RBV and network theory of internationalization have been integrated in order to examine the relevance of internal resources (human capital and learning

² A detailed breakdown of ICT sector imports and exports in terms of value and service category is presented in Table 1.2: Trade in Services (Imports and Exports of Telecommunications, Computer, and information services)

orientation) and external resource (foreign alliances) for the internationalization of born global SMEs. This study is based on the premises that in born-global SMEs, human capital of an organization facilitates its internationalization, provided it is optimally calibrated with the learning orientation and foreign alliances the firm can develop. Hence, this research tends to address the following research question. *What is the relationship of human capital with the internationalization of born-global SMEs of ICT sector of Pakistan and how does learning orientation facilitate this relationship in the presence of foreign alliances as a boundary condition?* In order to address the research question, following research objectives are developed.

- 1. To ascertain the link between human capital and internationalization of born-global SMEs of ICT sector of Pakistan.*
- 2. To determine the relevance of learning orientation for the relationship between human capital and internationalization of born-global SMEs.*
- 3. To assess the role of foreign alliances for the relationship of learning orientation and internationalization of born-global SMEs.*
- 4. To explicate the relevance of learning orientation at different levels of foreign alliances for the indirect relationship between human capital and internationalization of born-global SMEs.*

1.4 Significance of the Study

There is an urgent need for the development and improvement of theories, perspectives, as well as explanatory and theoretical models, regarding how born-global firms achieve rapid internationalization (Falahat et al., 2018; Knight & Liesch, 2016; Knight, 2015). This study attempts to make a number of contributions to literature by focusing on the internationalization of born global SMEs. Much of the extant research that studies born global internationalization confers on a single theoretical justification or framework, the most popular being the Uppsala (or incremental) model of internationalization (Knight & Liesch, 2016; Knight, 2015; Rialp et al., 2005). On the contrary, various theories, perspectives, and frameworks should be used to explain the born global phenomenon, as

Morais & Franco, (2018) suggested that holistic view of internationalization model is necessary to fully understand this complex phenomenon.

This study also contributes to SME internationalization theory by establishing human capital and internationalization have a positive indirect relationship. This is carried out by systematically evaluating the effect of mediator (learning orientation) on the relationship between employee human capital and born global SME internationalization (Falahat et al., 2018; Knight, 2015; Javalgi & Todd, 2011). Prior research has mainly focused on the role of human capital of the entrepreneurs, mostly neglecting that firm level human capital can also be of significance for resource constraint born global SMEs (Onkelinx et al., 2016a; 2016b; Kungwansupaph & Siengthai, 2014; Ganotakis & Love, 2012; Campbell et al., 2012; Ruzzier et al., 2007). This study articulates the idea that apart from focusing on entrepreneur's human capital, the human capital of the entire organization should be considered as a valuable source for internationalization of born global SMEs. Moreover, literature suggests that human capital and learning orientation can be interrelated yet, the influence of human capital on learning orientation is still less explored (Kungwansupaph & Siengthai, 2014; Hatch & Dyer, 2004). In an attempt to extend prior research, this study attempts to examine the relationship between these intangible firm resources in the context of born-global SMEs. Thirdly, this study contributes to the RBV of the firm by suggesting that bundle of intangible internal and external resources enhance each other's value, such that human capital and foreign alliances of the firm augment its learning abilities, experiential knowledge and implementation of knowledge to achieve the goal of internationalization of born global SMEs. This study answers the call by scholars, who urged researchers to depict the influence of knowledge resources and alliances on the internationalization of born global firms (Knight & Liesch, 2016; Knight, 2015).

This study also makes numerous contributions to the human capital and international business literature. Human capital is generally articulated as a source of superior firm performance (Onkelinx et al., 2016a; Crook et al., 2011; Youndt & Snell, 2004) and there is limited evidence regarding its role in

internationalization of emerging market SMEs (Gonzalez-Perez et al., 2016; Javalgi & Todd, 2011; Ruzzier et al., 2007; Fletcher, 2004). Emerging markets are different from the advanced economies, their infrastructure limitations, higher political uncertainty, risk, administrative barriers, uncertain law and order conditions affect development and growth of the companies (Falahat et al., 2018; Khan & Lew, 2018). Thus it is pertinent to study the role of human capital for the internationalization of born-global SMEs in a developing economy. Also, more sophisticated multidimensional scales of human capital and internationalization were used to collect and analyze data as urged by the prior researchers (Marvel et al., 2016; Onkelinx et al., 2016a; 2016b; Javalgi & Todd, 2011; Clercq et al., 2008). The phenomenon of internationalization has been studied widely from an outward (export) perspective (Gonzalez-Perez et al., 2016; Felzensztein et al., 2015; Wagner, 2012; Rocha et al., 2012; Liu et al., 2011; Crick & Jones, 2000). The importance of imports has been underemphasized in empirical literature (Ganotakis & Love, 2012; Bernard et al., 2007). To address this important gap, our study ascertains the level of internationalization through both inward and outward internationalization activities of firms.

1.5 Data Collection and Analysis Procedures

This study analyzes data collected from top executives of the Pakistani ICT firms to explore the resource-based view factors that contribute to internationalization. Three factors are considered to have positive influence on firm internationalization namely: (a) human capital of the firm (b) learning orientation and (c) foreign alliances. These factors are consistent with the tenets of RBV of the firm and network theory (Lavie & Miller, 2008; Coviello & Munro, 1997; Barney, 1991). To analyze their relevance in the Pakistani context, a series of analysis is conducted on a sample of 112 born-global SMEs of ICT sector. Preliminary analysis includes analysis of sample characteristics, tests for normality and multicollinearity, followed by confirmatory factor analysis (CFA) using AMOS. After the CFA, a mediation, moderation, and 2nd stage moderated mediation analysis is conducted in SPSS using the Process macro by Hayes (2015).

1.6 Key Definitions

The key definitions of this thesis are provided in the following table.

Table 1.6: Key Definitions

Human Capital	Barney, (1991, p.101)	Human capital of firm constitutes the “training, experience, judgment, intelligence, relationships, and insights of individual managers and workers in a firm.”
Learning Orientation	Sinkula et al., (1997, p. 309)	“One can conceptualize learning orientation as giving rise to that set of organizational values that influence the propensity of the firm to create and use knowledge. Learning orientation influences the degree to which an organization is satisfied with its theory in use and, hence, the degree to which proactive learning occurs.”
Internationalization	Hitt et al., (1997, p. 767)	“International diversification may be defined as expansion across the borders of global regions and countries into different geographic locations, or markets.”
Foreign Alliances	Lavie & Miller, (2008, p.625)	“A firm’s skill in getting access to external resources owned or controlled by other firms by bridging national boundaries and leveraging a firm's competitive advantage in foreign markets.”

1.7 Assumptions and Delimitations of the Study

In this study, few assumptions regarding respondents’ knowledge, awareness, and use of relevant constructs have been made. It is assumed that respondents are aware of their born-global status, as well

as they have complete knowledge about their organization and filled out the information based on their organizational situation. It is also assumed that respondents will provide honest responses to the questions in the survey. Moreover, the measures used for estimating human capital, learning orientation and internationalization are considered to be applicable to ICT sector firms. Furthermore, this study is delimited to the born-global SMEs of the ICT sector of Pakistan.

1.8 Organization of the Thesis

Chapter One presents the introduction of this thesis. It highlights the relevance of born-global SMEs, followed by the discussion of research question and objectives of the study. Moreover, it offers the definitions of the key terms of this study, a brief overview of the methodology, the significance of the study, key assumptions and delimitations of this study.

Chapter Two contains in depth review of literature. It discusses the underlying theories of this thesis, followed by comprehensive literature of key constructs including human capital, learning orientation, foreign alliances, and internationalization. This chapter sheds light on the relationships among variables and their pattern of influence on one another that has helped in devising research hypotheses and afterwards a theoretical framework of this research.

Chapter Three provides the discussion about the methodology adopted in this research. This section focuses on the research strategy, its design, respondent characteristics, operational definitions of constructs and discussion on the sampling technique. Finally, it gives an overview about the data analysis tools and techniques.

Chapter Four gives empirical evidence for testing the proposed hypotheses and theoretical framework. It systematically analyzes the data, by describing its characteristics, establishing its normality, reliability and validity. Subsequently the tests of the proposed model using Process macro are presented.

Chapter Five sums up the thesis by discussing the main findings, concludes the conceptual

model, and explains the contributions of this research. Also, this section discusses the implications for managers and policy makers, limitations, and future research directions based on the empirical evidence and relevant literature.

Chapter Two: Theoretical Background and Hypotheses

2.1 Introduction

A firm's resources include all the assets, skills, attributes of the organization, routines, knowledge that are necessary for it to operate efficiently and stand out strategically from its competitors (Barney et al., 2001). These tangible and intangible firm resources form the core of its competitive advantage in the markets where they operate (Barney et al., 2011; Barney, 1991). In particular, intangible assets such as tacit or codified knowledge, information, experiences, and skills set of internal and external firm actors result in idiosyncrasies, which ultimately facilitate firm expansion including the internationalization of firm (Stoian et al., 2018; Hatch & Dyer, 2004; Wright et al., 1994). Knowledge of a firm can be perceived as something that embodies its employees in the form of human capital, which can also be shared with members of network or within groups characterized as social capital or institutionalized within processes, memory and databases of the firm (Youndt & Snell, 2004; Wright et al., 2001).

Specifically, this research wants to identify the basis of the competitive advantage of born-global SMEs that enables it to internationalize early and rapidly. Instead of focusing on the entry modes and process of internationalization, this study explores the resources/capabilities that can facilitate internationalization. The RBV discussed in section 2.2 elaborates the notion that firms possess unique, rare inimitable, and non-substituable resources that leads to competitive advantage for firms in the market (Barney, 1991; Wernerfelt, 1984). Born-globals can use RBV in conjunction with the network theory which suggests that firms can utilize their network resources to familiarize themselves with uncertain foreign markets to gain competitive advantage in the markets they aim to serve (Ibeh & Kasem, 2011; Gassmann & Keupp, 2007; Barney et al., 2001).

RBV argues that in order to attain maximum benefits from the constellation of firm resources possessed by firm, they must be used in a complementary manner (Barney, 1991). RBV mostly focuses

on the internal resources, which can be complemented with external resources as depicted by network theory, which is a key theoretical basis in the International Entrepreneurship literature (Coviello, 2006), and used widely in born-global research (Freeman et al., 2006). Keeping RBV at the very foundation of this thesis, it has been proposed that theoretically embedded knowledge can be acquired from firm specific capabilities such as human capital, learning orientation and foreign alliances of the firm that can smooth out the path towards internationalization of born-global SMEs (Falahat et al., 2018; knight, 2015).

2.2 The Resource Based View of the Firm

The RBV is rooted in organizational economics literature, where theories of profit and competition shed light on causes of competitive advantage due to differences in internal resource endowments of the firm (Penrose, 1959; Schumpeter, 1939; Ricardo, 1817). Over the years, RBV has established itself to be among the most relevant theories in the management literature for articulating the competitive behavior of firms and providing the most dominant explanation of inter-firm performance differences (Nason & Wiklund, 2018; Barney et al., 2011; Hakala, 2011; Kraaijenbrink et al., 2010; Hoopes et al., 2003; Barney et al., 2001). According to Wernerfelt, (1984, p.172) firm's resources are "anything which could be thought of as a strength or weakness of a given firm... those (tangible and intangible) assets which are tied semi permanently to the firm." In extension to that view, Barney, (1991, p.101) suggested that "all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness." RBV puts forward the idea that firms can be assumed as bundles of tangible and intangible resource endowments collected and developed over a course of time and more importantly, these bundles are heterogeneously distributed across firms (Nason & Wiklund, 2018; Peteraf, 1993; Wernerfelt, 1984; Penrose, 1959).

RBV postulates competitive heterogeneity that entails enduring and systematic performance

differences among relatively close rivals pertaining to the presence of superior productive factors owned by the firm which are in limited supply (Hoopes et al., 2003; Peteraf, 1993). These superior resources can be characterized as: 1) physical capital that includes firm's plant, machinery, geographical location and accessibility to raw materials; 2) human capital which is composed of trainings, judgments, intelligence, insights and relationships of workforce; and 3) organizational capital that encompasses firm's reporting systems, formal and informal planning, controlling and coordinating systems as well as informal relations with other firms (Tabares et al., 2015; Barney, 1991).

Under the premises of RBV, firm can potentially achieve sustainable competitive advantage over its rivals, if its resources are valuable, rare, inimitable and non-substitutable referred to as VRIN criterion. The resources should be valuable that is the resources must have the ability to neutralize any threats to the firm and exploit opportunities. Also, the bundle of resources should be rare among existing or potential competitors, that is, possess a certain degree of rarity and should not have close substitutes (Barney, 1991). Since valuable and rare resources allow firms to implement efficient strategies that create value and isolating mechanisms such as inimitability and non-substitutability prevent replication of these value-creating strategies (Nason & Wiklund, 2018; Barney et al., 2001; Peteraf, 1993). RBV proposes an inside-out approach to the dynamic capabilities perspective by optimally bundling the VRIN resources of the firm such as management skills, its organizational processes and routines and the information and knowledge it controls (Barney et al., 2011; Barney et al., 2001).

Firms compete with each other to gain competitive advantage (Wernerfelt, 1984), as explained by the RBV of the firm (Teece et al., 1997; Barney, 1991), it is highly likely that firms with VRIN resources will be able to exploit potential opportunities that firms with non-VRIN resources cannot find within their grasp (Nason & Wiklund, 2018). Certain firm specific capabilities are deemed necessary for firms to possess in order to survive in competitive markets. Past research has meticulously elaborated the role of numerous strategic orientations and organizational capabilities for the advancement of organizational goals such as internationalization (Javalgi & Todd, 2011; Subramaniam & Youndt,

2005). Knowledge embedded in human resources of a firm and learning orientation are internal resources whose benefits are exclusively available to a particular firm (Gerschewski et al., 2015; Kogut & Zander, 1992). These capabilities are accumulated and developed over time and cannot simply be bought or acquired. Satisfying the heterogeneity and VRIN criteria, it is proposed that these resources of the firm can contribute towards competitive advantage of firm especially in global markets (Knight & Liesch, 2016; Barney et al., 2001; Barney 1991). As suggested by Skaggs & Youndt, (2003, p. 86), *“When customers introduce a high degree of variability into the service production process, service organizations may be able to address this variability (i.e., successfully satisfy customer needs) when their employees are proficient at diagnosing problems, thinking creatively, developing novel solutions, and so on; that is, when they possess high levels of skill, knowledge, and expertise (i.e., human capital).”* Moreover, literature suggests that the RBV offers rich possibilities in explaining the competitive advantages of born global SMEs as firms that *“internationalize early after inception are more flexible, in terms of being able to quickly learn the competencies required for growth in foreign markets”* (Gerschewski et al., 2015, p.3). Thus, firms that possess optimal levels of VRIN resources are more likely to cope with uncertainties and can contribute to internationalization of born-global SMEs.

Literature has time and again stressed that network theory can further strengthen the competitive advantage of firm in uncertain markets (Li et al., 2018; Stam et al., 2014). The social capital theory suggests that firms maintain network ties with a mutual understanding of sharing resources, opportunities and valuable information among members of the network (Adler & Kwon, 2002; Lin, 2001). These favors are extended to the members of network only (Falahat et al., 2018). Foreign alliances may help firms to establish their supremacy over their competitors (Barney et al., 2001).

The concept of social capital can be regarded as a recent addition to the study of firm’s intangible resources and their consequent relationship to attaining competitive advantage (Paul et al., 2017). Due to the exclusivity of tangible and intangible resource sharing among network members, it

has been suggested by some researchers that external networks can be regarded an extension or part of the RBV of the firm (Huggins & Johnston, 2010; Agndal et al., 2008; Lavie, 2006). This is because social capital can enable the network members to access both intangible and tangible assets of the partner organizations, which are otherwise unavailable to the firm (Huggins & Johnston, 2010). Developing and utilizing existing social networks can facilitate internationalization, as they enhance knowledge and educate firms about the potential opportunities in foreign markets, provide advice regarding optimal ways and procedures of conducting business as well as experiential learning to the SMEs (Zhou et al., 2007). Thus, firm resources, capabilities and networks can broadly be characterized under the premises of RBV, and together they can potentially enhance chances of internationalization of born global firms of the ICT sector.

2.3 Theory of Internationalization

As per the theory of internationalization, there are two most common approaches followed by firms that are planning to internationalize (Gassmann & Keupp, 2007). Some firms take up a slow and gradual approach to internationalization through carefully calibrated series of incremental steps towards closer geographic locations before moving to farther markets, known as the Uppsala model of internationalization (Johanson & Vahlne, 2009; 1990; 1977). In contrast, some firms tend to internationalize fast and in early phase of their establishment, referred to as born global firms (*discussed in detail in section 1.2*) (Knight & Liesch, 2016; Knight & Cavusgil, 1997). The process theory of internationalization ('Uppsala model') appeared to be at odds regarding the born-global firms, the basic difference being the rapidity of internationalization (Chetty & Campbell-Hunt, 2004).

The network approach to internationalization articulated by Coviello & Munro, (1997), is a complement to traditional theories. The network theory is considered to be extensively applicable on SME internationalization (Oehme & Bort, 2015). The core of network theory is that firms are supported by their formal and informal network ties especially the firms from software sector (Coviello & Munro, 1997). The network theory essentially argues that SMEs' networks can support its internationalization

(Ibeh & Kasem, 2011). Moreover, network approach is found to complement rapid internationalization as networks share knowledge and information about opportunities in foreign markets that can ease internationalization (Welch, 2015). Past research argues that rather than following a single model of internationalization, a holistic view encapsulating various models and theories of internationalization should be used to explain the process of internationalization of SMEs (Morais & Franco, 2018; Knight, 2015; Gerschewski et al., 2015; Spence & Crick, 2006).

Internationalization refers to “extending the operations of a firm in distant markets rather than using arms-length market transactions” (Hitt et al., 1997, p.767). Past research focuses primarily on the internationalization of MNCs, the trend has been changing as SMEs have been indulging in speedy internationalizations, which has attracted attention from scholars (McDougall & Oviatt, 2000). Internationalization can be segregated in two components, inward (imports) and outward (exports) (Welch, 2015, Welch & Luostarinen, 1993). Outward internationalization represents the engagements of domestic firm in foreign markets including franchising and/or licensing to foreign firms, mergers, acquisitions, establishing subsidiaries, export of goods or raw materials (Li et al., 2017; Welch & Luostarinen, 1993). Selling or aiming to sell products and services to foreign markets is the most common practice done by emerging market firms (Zhou et al., 2007) to enter into international markets (Aulakh et al., 2000). There can be a variety of reasons for firms to enter foreign markets such as saturated home markets, unutilized production capacity, better opportunities for products in foreign markets, unfavorable climate in home country, intense competition in local markets, encouragement by government export agencies to state a few (Bell, 1995; Kaynak et al,1987). Exporting firms have a higher probability of survival and growth than their non-exporting counterparts (Escribá-Esteve et al., 2008; Bernard & Jensen, 1999).

According to Kaynak et al., (1987, p.31,32), small exporting firms have two major problems. First, the SMEs find it difficult to locate a reliable distributor and communicate with customers. Second,

these small firms usually do not find assistance from government and despite producing high quality products lack the ability to market them in the foreign markets. Conversely, the internationalization of ICT industry firms are different than SMEs of other industry. Software development and implementation usually do not require physical distribution, as well as trade and legal barriers to entry in foreign markets mostly do not apply to these firms (Bell, 1995). Hence their internationalization is relatively easier than other manufactured goods, which require physical transfer of goods.

Inward internationalization could be referred to such activities, which domestic firms undertake with foreign market firms in their home markets such as joint ventures, franchising, licensing, imports of products, raw materials and technology (Li et al., 2017). Importing is generally associated with high fixed sunk costs as before importing firms have to bear the cost of searching for potential partners in foreign markets, costs of negotiations, inspection of products. Research supports the positive causal relationship of imports with productivity of firm (Vogel & Wagner, 2010). Importers can enhance performance by using high quality inputs, extracting technology from imported goods. Theorists and researchers mostly ignore inward internationalization, as outward internationalization has been their center of attention (Wagner, 2012). In most of the studies, internationalization has been categorized as sales in foreign markets (Subramony et al., 2018; Clercq et al., 2008; Crick & Jones, 2000; Sullivan, 1994). According to Bernard et al., (2007, p. 123), past research has not paid much attention to imports, due to which "...the new theories of heterogeneous firms and trade were developed to explain facts about firm export behavior and yield few predictions (if any) for firm import behavior." Hence it is important to study inward and outward internationalization in a single study so that the impact of both forms of internationalization in firms can be examined (Rocha et al., 2012; Crick & Jones, 2000). Taking this discussion forward, this study uses the concepts of both inward and outward internationalization to study the internationalization of born-global SMEs of ICT sector.

Firms can successfully tap into international markets by utilizing their VRIN resources as suggested by RBV. These VRIN resources support firms to deal with challenges of operating in multiple

and heterogeneous markets around the globe pertaining to the advanced technical knowledge and superior skill level of employees (Love & Roper, 2015), and effectively deal with risks, uncertainties and complexities inherent in the phenomena of internationalization (Onkelinex et al., 2016b).

The combination of human capital, learning orientation and foreign alliances can provide firms with the efficient mechanism that smooth out its path towards rapid internationalization. This is because human capital of the firm creates knowledge, which is enhanced and stored pertaining to organization's learning orientation. This knowledge of firm is further enhanced via its external resource of foreign alliances. Combined together these resources enable firm to rapidly and effectively deal with international market challenges.

2.4 Human Capital of the Firm

The concept of human capital started evolving in the 20th century and the term was formally introduced in 1950³s (Tan, 2014). Though there are numerous ways in which researchers have elaborated the concept of human capital, but there is general consensus that human capital comprises of education, training and skills of individuals (Lado & Wilson, 1994; Barney, 1991; Becker, 1964). According to Barney, (1991, P. 101), human capital of firm comprises of the “training, experience, judgment, intelligence, relationships, and insights of individual managers and workers in a firm” (Nyberg et al., 2018; Youndt & Snell, 2004). According to the neoclassic school of thought, human capital of employees may be enhanced through education and trainings in order to achieve high productivity (Tan, 2014). In this thesis, human capital is defined as knowledge and skills of employees. The idea that human capital may lead a firm to competitive advantage has been widely acknowledged, as it ensures attainment of distinctive capabilities for a firm (Youndt & Snell, 2004). The knowledge-based view, which has emerged from RBV argues that knowledge embedded in the human capital of a firm is an ultimate source of competitive advantage as it is amongst the valuable and inimitable

³ The idea of human capital was first discuss in regard to income inequality by Mincer, (1958)

resources of the firm (Grant, 1995; Kogut & Zander, 1992).

As mentioned earlier, the RBV of firm proposes that firm resources that satisfy the VRIN criteria lead to firm's competitive advantage. For a firm to outperform its rivals, its valuable resources should stay with the firm at least temporarily and must not be widely available to competitors. Otherwise, resource acquisition by competitors can easily mitigate the competitive advantage of the firm (Peteraf, 1993). Human capital fulfills the VRIN criteria as well as satisfies the resource heterogeneity and imperfect mobility assumptions of the RBV as it includes the education, experiential knowledge, stock of competencies, trainings, expertise, and connections that individuals develop over time (Barney et al., 2011; Hatch & Dyer, 2004; Wright et al., 1994; Barney, 1991). Highly intellectual and skilled employees can contribute to firm's well-being. As noted by Wright & McMahan, (1992) experience of employees can be vital in shaping up firm's human capital. It is understandable that firms try to acquire and improve its human capital in order to ensure their superiority over competitors.

Considering the fact that human resources can easily switch jobs between firms, they effectively take away with them the human capital they possess but it cannot be perfectly deployed, expropriated, and utilized by rival firms (Campbell et al., 2012; Hatch & Dyer, 2004). Primarily it is because of the fact that human capital acquired from rivals, though adds to the knowledge of the firm, but that only happens after the rival bears considerable adjustment costs to adjust and adopt the recently acquired human capital according to the environment and circumstances of new firm (Teece et al., 1997; Mahoney, 1995; Penrose, 1959). As Kogut & Zander, (1992) claimed that personal traits such as level of human intelligence alone may render difficulty in duplication or the transfer of technology, especially if intelligence is decomposed into aptitudes for solving differentiated tasks. Hence, the value that human capital creates is exclusive for a particular firm and is hard to re-create even if the rivals acquire the resource.

Numerous factors internal to the firm such as social complexity (social interaction of

employees/teams at workplace), unique historical conditions that shape policies, practices and culture or causal ambiguity (where the cause/source is not easily identified) explain the phenomena of human capital as contributory factor for competitive advantage of the firm (Leiblein, 2011; Wright et al., 1994; Barney, 1991). Thus, it is highly likely that human resources/capital of a particular firm is valuable, rare, inimitable and non-substitutable as they are developed over time due to a numerous factors such as education, trainings and experiences that cannot be duplicated.

A lot of prior research has deemed firm performance to be an outcome of firm's human capital for a number of different industries (Nieves & Quintana, 2016; Crook et al., 2011; Collins & Smith, 2006; Youndt & Snell, 2004). However, human capital may prove to be a useful resource for firms that want to internationalize based on the level of knowledge, skills, talent, and experience it can provide to the firm (Onkelinx et al., 2016b; Brock, 2012; Javalgi & Todd, 2011; Fletcher, 2004). Firms that have higher human capital can adapt to new technologies and dynamic market conditions by timely sensing the need for change, developing and implementing efficient strategies to meet the changing needs. High level of human capital paves way for firms to internationalize easily by rationally dealing with challenges (Onkelinx et al., 2016a; 2016b). As per the above discussion, a direct and positive link between human capital and internationalization of born-global SMEs is proposed in the following hypothesis.

H₁: Human capital positively impacts the internationalization of born-global SMEs.

2.5 Learning Orientation

Learning is seen as a vital component for organization to stay up to date in the increasingly dynamic environments (Harvey et al., 2019). Organizational learning theory provides the foundations of learning orientation of firm by portraying it as a learning entity (Gerschewski et al., 2015). Learning orientation is the attitude of learning in firms (Real et al., 2014; Clercq et al., 2005; Nystrom & Starbuck, 1984) facilitated by managerial and organizational characteristics (Chiva & Alegre, 2009).

Learning orientation of a firm explains the ability to learn from past experiences and internalize the learning into its business processes and decisions (Deutscher et al., 2016; Jerez-Gómez et al., 2005). Learning orientation equips firm with a set of values that encourage the generation, usage or applicability of knowledge (Sinkula et al., 1997). Organizations tend to store this “knowledge in their procedures, norms, rules, and forms” (March, 1991, p. 73). This knowledge is accumulated over time through the mutual learning of employees (March, 1991; Walsh & Ungson, 1991). The process of learning is based on “encoding inferences from history into routines that guide behavior” (Grant, 1996, p.113). It is due to the fact that organizational routines are composed of “forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate” (Levitt & March, 1988, p. 320). Organizational culture is developed over time as routine activities embed capabilities into organizational memory which stay within the organization over time (Falahat et al., 2018; Autio et al., 2000; Barney, 1991).

Organizational learning is a cyclical phenomenon that occurs at different stages and levels (Liu et al., 2002). It may be a result of organizational level experiences, or from individual-level learning, which may lead to organizational learning or vice versa (Jerez-Gómez et al., 2005). Individual actions can cause organizational interactions with the environment and the resultant outcomes of these interactions can be interpreted and analyzed by individuals to form collective organizational actions and response maps which can be referred to in future (Lee et al., 1992).

Organizational learning enables firm to exploit existing knowledge and explore new knowledge in both domestic and foreign markets (Clercq et al., 2005; March, 1991). The exploration and exploitation of knowledge enhances firm’s capabilities to create, integrate and transfer its knowledge and adapt according to changing market conditions to improve performance and expand foreign market endeavors (Jerez-Gómez et al., 2005; Clercq et al., 2005; Calantone et al., 2002; Sinkula et al., 1997).

A firm that is learning-oriented can be regarded as a one that concentrates on “the propensity to

learn and adapt” (Mavondo et al., 2005, p. 1237). Organizations that value learning may not hesitate to challenge their long-standing beliefs (Autio et al., 2000). Indeed, such organizations are well equipped to anticipate and benefit from turbulent and uncertain market circumstances as they continuously improvise on information gathered from customers, suppliers, competitors, and other informants (Slater & Narver, 1995). Learning can be regarded as a factor to reduce variability in performance (Real et al., 2014). Following the RBV, learning is a superior resource as compared to other resources of the firm because it enables firms to access market information more rapidly as compared to competitors, a faster response to market information may in turn assist these firms in maintaining their competitive advantage (Baker & Sinkula 1999; March, 1991). Thus, growing firms need to be committed to learning as it plays a vital role in obtaining competitive advantage as operations expand (Wang, 2008; Autio et al., 2000).

In essence, organizations that encourage learning orientation, urge employees to be open to new conventions, ideas and share knowledge among each other as well as challenge their long-standing beliefs, assumptions, standards and past theories, that have been in place for a long time, in this way new and beneficial knowledge is created in the firm (Senge, 1990; Argyris, 1977). Learning orientation has been conceptualized as a second order construct with three components namely: commitment to learning, shared vision, and open-mindedness (Chiva & Alegre, 2009; Sinkula et al., 1997). Shared vision can be differentiated from the other two constructs in the sense that shared vision defines the direction of learning whereas the other two dimensions deal with the intensity of learning. Both direction and intensity of learning are important for the learning orientation of a firm (Sinkula et al., 1997).

Commitment to learning is important for any organization, as it is the process that ensures improved performance and competitive advantage. Organizational commitment towards learning is the essence of the idea of learning orientation (Sinkula et al., 1997). Commitment to learning of an

organization can be assessed by its efforts in fostering and promoting learning climate (Calantone et al., 2002). Organizations that place higher value on learning are more likely to learn than their counterparts.

Open mindedness of an organization is its ability to critically analyze old routines and espouse new ideas (Sinkula et al., 1997). Organizations tend to learn and develop cognitive maps over the course of their interactions with the environment. All the knowledge and information gathered by the firm is stored as part of its organizational memory which can be accessed and used by individuals in that organization (Cegarra-Navarro & Sánchez-Polo, 2011; March, 1991). Over time these mental models, routines, assumptions, beliefs and behaviors become obsolete, requiring firms to unlearn their longstanding practices and adopt new ways and practices (Calantone et al., 2002). The process of unlearning is crucial for organizational change (Nystrom & Starbuck, 1984), which may occur due to organization's value of open mindedness (Sinkula et al., 1997). Hence, the role of organization and management as key players for creating and sustaining open mindedness in organization is indispensable (Hernández-Mogollon et al., 2010).

Shared vision interconnects the activities of employees and develops relationships based on information exchange, knowledge sharing and shared ideas. It concentrates energies of the individuals in a common direction (Garcia-Morales et al., 2006). Shared vision guide individuals about the expectations of organization, the theories, and reference maps, which are used for particular operations. Without a shared vision, it is difficult for individuals not to have divergent views especially on new projects (Sinkula et al., 1997). This may lead to a higher possibility of failure to implement creative ideas due to lack of commonality of direction (Calantone et al., 2002).

2.6 The Mediating Role of Learning Orientation

2.6.1 Human Capital and Learning Orientation

Human capital is an essential resource to enhance firm level learning and knowledge accumulation (Youndt & Snell, 2004). Human capital is typically the outcome of individual learning

that in turn significantly enhances ongoing learning within the organization (Hsu & Fang, 2009; Hatch & Dyer, 2004). The buildup of human capital through numerous sources including trainings and education can increase efficiency of resources and accelerate the learning for the organizations (Youndt & Snell, 2004).

Born global firms differ from firms with respect to the process of internationalization as they do not follow incremental internationalization model and they do not have the opportunity to learn from small mistakes (Saarenketo et al., 2004). To mitigate these risks, born global firms must also be able to learn fast to adjust their internationalization strategy and leverage its internationalization gains (Onkelinx et al., 2016a). Learning orientation can be regarded as a competence of the firm to deal with complexities and uncertainties of the emerging domestic markets and dynamic foreign markets (Kungwansupaph & Siengthai, 2014). A substantial human capital resource base can significantly facilitate the learning capability of the firm (Youndt & Snell, 2004). Hence, this learning capability can improve the ability of SMEs to sense uncertainties in the dynamic environment, approach these changes in environment with effective strategies and implement those strategies efficiently to deal with complexity of its operating environment (Wright et al., 1994).

Human capital in the form of individual expertise may or may not stay within organizations and can change overtime due to numerous factors such as hiring, mobility, and turnover of employees (Campbell et al., 2012; Hatch & Dyer, 2004). There is no denying fact that human resources of contemporary organizations are mobile however; their firm-specific knowledge comprising of both codified and tacit knowledge acquired in specific environments are often not fully mobile (Hatch & Dyer, 2004). Thus, institutionalized knowledge embedded processes and routines associated with learning orientation stay within organizations and do not change very easily (Walsh & Ungson, 1991).

Literature describes knowledge as to what is known (Harrison & Leitch, 2005). Human capital builds tacit and codified knowledge of organizations through learning, which is not readily expropriated

by rival firms (Hitt *et al.*, 2001). Codified knowledge is transferable and imitable whereas tacit knowledge is not easily diffused internally let alone in external environments as it is embedded in routines, human skills, experiences, intuitions and relationships (Stoian *et al.*, 2018; Youndt & Snell, 2004; Grant, 1996). Hence, when human resources leave altering the human capital of the firm, the trickledown effect on learning orientation would be negligible. This is due to the tacit knowledge created by human capital through learning which stays with the firm and eventually leads to creation of competitive advantage (Hatch & Dyer, 2004; Szulanski, 1996). Human capital is a firm's resource that enhances knowledge by learning in rapidly internationalizing small companies (Saarenketo *et al.*, 2004). In this context, a positive link between human capital and learning orientation is proposed in the following hypothesis.

H_{2a}: Human capital is positively associated with the learning orientation of born-global SMEs.

2.6.2 Learning Orientation and Born Global Firm Internationalization

Learning orientation is a vital factor in growth and survival of firm in contemporary knowledge-based economy (Kungwansupaph & Siengthai, 2014). In fact, the learning orientation can assist firms to mitigate uncertainties of the global markets (Ruokonen & Saarenketo, 2009). To adapt to the dynamic operating circumstances, firms should show flexibility and transform themselves by adoption of new and better routines and structures in order to absorb new knowledge (Chetty & Campbell-Hunt 2004). In this regard, a vast empirical literature supports the notion that knowledge is an integral component for the successful internationalization of contemporary firms (Rocha *et al.*, 2012). Thus, learning orientation of a firm can impact its willingness and capability to internationalize. Firms that value learning, develop a learning orientation over time, which involves a continuous search for ways to adapt to foreign environments (Fernández-Mesa & Alegre, 2015; Ruokonen & Saarenketo, 2009). When firms spend time and resources on learning activities, they enhance their knowledge base, polish their skills to learn from their stakeholders (experiences and mistakes) and are able to apply the knowledge in the local as

well as international markets (Clercq et al., 2005; Autio et al., 2000).

International growth of a firm is driven by two important resources of the firm namely knowledge and learning (Autio et al., 2000). Learning orientation play a vital role in improving performance of small, resource poor firms in international arena (Kropp et al., 2006). Learning is a continuous process, it begins in the foundational stages of the firm and continuous to develop as the firm grows and expands its horizons in foreign markets (Ruokonen & Saarenketo, 2009). This phenomenon of learning is important as it helps to tackle uncertain situations which start-ups usually come across and fail to efficiently deal with them (Wang, 2008). Particularly born-global firms face high uncertainty and risk for their rapid internationalization (Kungwansupaph & Siengthai, 2014). Thus, born-global firms tend to focus strongly on learning and can become learning-oriented firms earlier than conventional firms. As per the above discussion, the positive link between learning orientation and internationalization of born global firms can be proposed in the following hypothesis.

H_{2b}: Learning orientation is positively associated with the internationalization of born-global SMEs.

In the case of rapid internationalization it has been suggested that firms capitalize on the experiential knowledge of their employees (human capital) as the key enabling factor for the foreign operations and experiences (Sharma & Blomstermo, 2003; Autio et al., 2000; Oviatt & McDougall, 1997). According to the proposed H_{2a} and H_{2b} hypothesis, it is proposed that learning orientation can mediate the link between human capital and internationalization of born-global SMEs.

H_{2c}: Learning orientation mediates the positive relationship of human capital with the internationalization of born-global SMEs.

2.7 Social Capital and Internationalization

Firms tend to make social connections for the growth and development of their businesses (Tang et al., 2008). Social capital is based on a simple and straightforward notion of making investment in

social relations with the expectation of returns in the marketplace (Lin, 2001). This study focuses on the network theory which suggests that networks are integral for information flows, resource acquisitions and quicker response of firms to market opportunities (Lin, 2008). The formation of social capital is contingent upon ties and affiliations of SMEs (Paul et al., 2017). Social capital can be considered as a resource, which is essentially about the relationship ties that provide opportunities and advantages to achieve specific outcomes due to one's relations in social structure (Suseno & Pinnington, 2018; Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998).

In this study, the social capital based on the network ties of the firm are the reflection of its number of foreign alliances (Li et al., 2018). The alliances are considered international when they are formed outside of firm's original market (Haase & Franco, 2011). This study focuses on the vital role of alliances in foreign markets rather than alliances in local markets pertaining to the higher value associated with the former for the born global SMEs. As elaborated by Lavie & Miller, (2008, p.625), "cross-border alliances can extend the range of partnering benefits relative to alliances with domestic partners by bridging national boundaries and leveraging a firm's competitive advantage in foreign markets."

Foreign alliances are voluntary agreements or understanding between independent firms to look for market opportunities, develop and commercialize new products, technologies, and services to achieve mutual benefits (Morais & Franco, 2018; Gulati, 1998). Foreign alliances and other forms of cooperation have been a strategic option increasingly used by firms to gain competitive advantage, which lies not just in internal resources of the firm but in shared resources and capabilities of network (Braga et al., 2016; Brouthers et al., 2015). These alliances are valuable to the firm as they may prove to be an attractive alternative for accessing complementary assets for the firm otherwise not available, reducing information asymmetries and sometimes mitigate the risk inherent in international operations (Paul et al., 2017; Brouthers et al., 2015; Child & Hsieh, 2014; Barney et al., 2001), particularly true in the case of rapidly internationalizing new ventures (Coviello, 2006). In fact, SMEs tend to develop

foreign alliances with a mutual understanding to gain access to critical tangible and intangible resources, share knowledge, and technological advancements that will eventually help them overcome issues of resource scarcity (Partanen et al., 2008; Mangematin et al., 2003).

In alliance literature, the role of knowledge is vital and has proved to be a decisive factor for gaining competitive advantage (Li et al., 2018; Grant & Baden-Fuller, 2004). In fact, the literature shows ample evidence that alliances are critical for enhancing organizational learning (Eisenhardt & Schoonhoven, 1996). Firms enter foreign markets based on their existing knowledge and the knowledge acquired from the alliances or ties with other firms (Khan & Lew, 2018; Kinght, 2015). Global firms can enhance knowledge and capabilities by allying with partners with distinctive value and culture systems (Jiang et al., 2010; Lavie & Miller, 2008). The accumulation of knowledge acquired from alliance partners opens new opportunities and constitutes a driving force in the development and growth of the firms and internationalization (Lindstrand et al., 2011; Inkpen & Pien, 2006; Yli-Renko et al., 2001). Blomstermo et al., (2004), used the term ‘experiential knowledge’ to denote a range of accumulated knowledge from international network of firm that facilitated the expansion of international operations in various markets. The presence of network ties creates significant value for the firm as they provide insights for explaining business communities and their inter-relationships (Brouthers et al., 2015). Network ties are an effective source of collecting information about the potential opportunities as well as resource sharing among network members which is vital for SME international growth (Ellis, 2011; Yli-Renko et al., 2002).

Social capital in the form of foreign alliances helps in the internationalization of the firms (Welch, 2015; Chetty & Stangl, 2010; Zhou et al., 2007). In fact, the ability to form networks can to an extent mitigate the risks of early internationalization (Baum et al., 2013). The network approach to internationalization is supplementary to the existence of firms that internationalize immediately after their creation (Haase & Franco, 2011). Networks are fundamental even before born-global firms are established, as the founders develop networks or use prior established relations to gain legitimacy,

capital and support to create the firm (Greve & Salaff, 2003; Hansen, 1995). For born-global firms the ability to rapidly form social ties in markets is a lynchpin for internationalization (Chetty & Campbell-Hunt, 2004). Literature has established that external factors such as foreign alliances can also influence the internationalization agenda of SMEs (Falahat et al., 2018; Li et al., 2018; Boso et al., 2013). However, this study examines the relevance of foreign alliances as a moderator in regards to the link between learning orientation and internationalization of SMEs of the ICT sector of Pakistan as proposed in the following hypothesis.

H₃: Foreign alliances will moderate the positive effect of learning orientation on internationalization such that at higher level of foreign alliances the indirect effect will be higher.

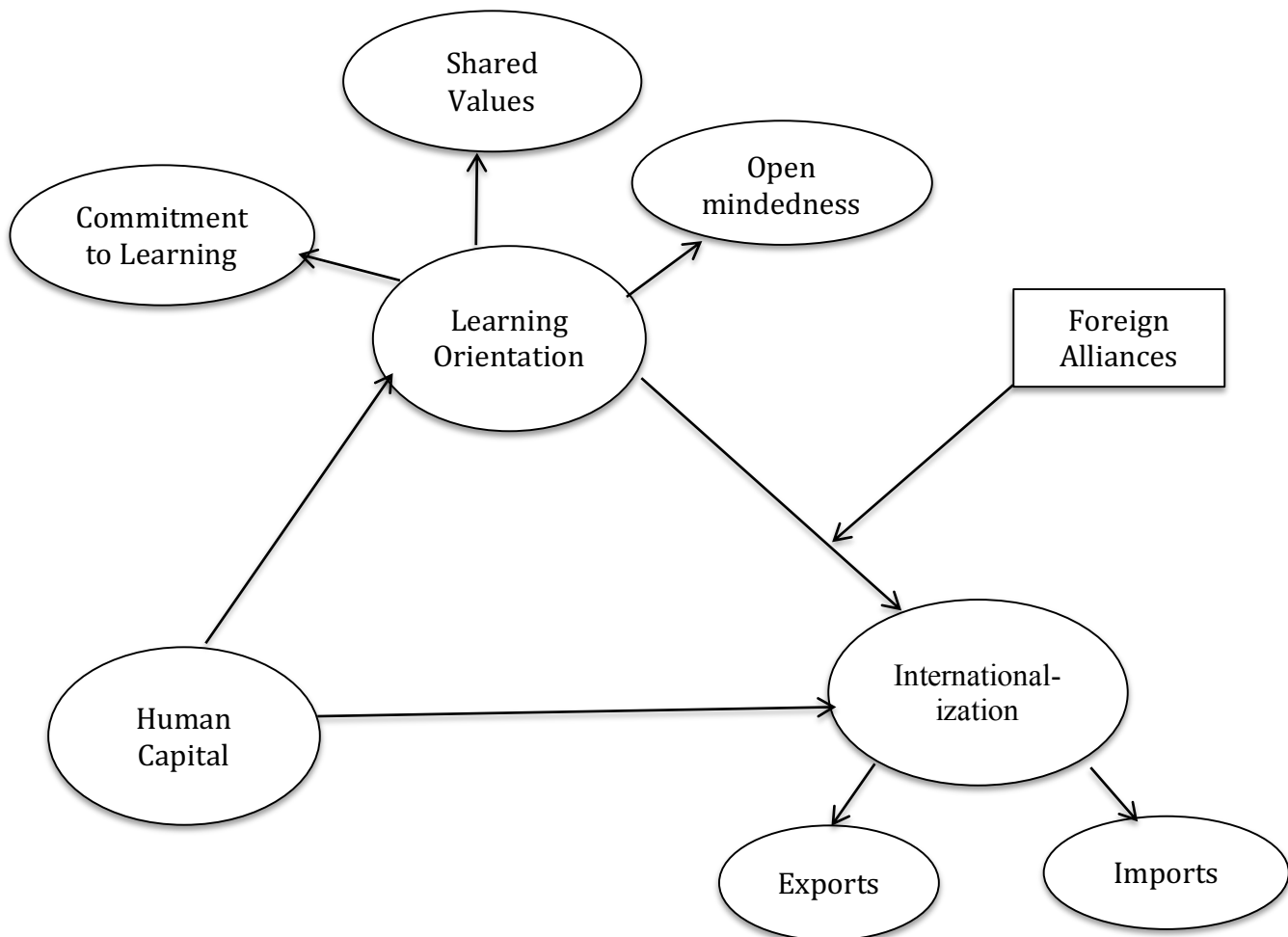
Moreover, foreign alliances of the firm when underpinned by resources such as human capital and learning orientation become an unmatched resource for firm internationalization (Suseno & Pinnington, 2018). Hence, this research aims to determine the role of foreign alliances as an external factor that can influence the indirect effect of learning orientation on the relationship between human capital and internationalization as postulated in the following hypothesis.

H₄: Foreign alliances moderates the positive indirect effect of human capital on internationalization through learning orientation such that at higher level of foreign market alliances the effect of human capital on internationalization can be higher.

2.8 Conceptual Framework

Based on the above discussion, the following conceptual model depicts the relationships that will be tested in order to validate the hypotheses.

Figure 1: Conceptual Framework



The following path coefficients will be estimated in the model.

human capital → internationalization = H_1

human capital → learning orientation = H_{2a}

learning orientation → internationalization = H_{2b}

human capital → learning orientation → internationalization = H_{2c}

learning orientation * foreign alliances → internationalization = H_3

human capital → learning orientation * foreign alliances → internationalization = H_4

2.9 Conclusions

The underlying rationale for the theoretical framework is the resource-based view of the firm, which suggests certain resources are unique to the firm, which ultimately give advantage to the firm

over competitors in foreign markets. This study asserts that key differences in firm's intangible resources such as human capital, learning orientation and foreign alliances provide firms with opportunities that may not be available to its counterparts. However, the influence of these resources on internationalization should not be viewed in isolation as their impact is considered to be intertwined. This research highlights the role of RBV, and network theory for internationalization of born-global SMEs (Falahat et al., 2018). In so doing, the research framework is grounded on the premises that human capital leverages the internationalization of born-global SMEs through learning orientation (mediator) and this underlying mechanism facilitates above mentioned link in the presence of a boundary condition foreign alliances linkages (moderator).

Chapter Three: Methodology

3.1 Introduction

The main objective of this chapter is to describe the research strategy and design that was employed in order to empirically test the proposed relationships of study. This chapter explains the rationale for choosing the relevant research strategy, design, sample and methods to answer the proposed research question. In so doing, this chapter provides details about the study respondents and data collection procedures that have been deployed to gather data from respondents. Furthermore, the discussion about the sampling criteria, choice of research instruments and data analysis techniques is explained.

3.2 Research Strategy and Design

A paradigm is a ‘way of thinking or doing’ (Frankel et al., 2005). A research paradigm is a set of core beliefs and assumptions that act as a frame of reference for the researcher (Jonker & Pennink, 2010). Though the paradigms are usually implicit in research studies, it is important to first understand and be clear about the paradigm that needs to apply for the particular research (Wahyuni, 2012; Neumen, 2013). A research paradigm comprises of epistemological, ontological and methodological elements (Frankel et al., 2005).

Epistemological considerations refer to the knowledge that will be sought after, expressed and understood in a particular area, and the relationship between knower and what is known (Wahyuni, 2012; Frankel et al., 2005). Epistemology comprises of two major approaches, positivism, and interpretivism. Positivism purposes that social phenomena can be objectively studied and is observable enough to provide data and facts whereas interpretivism is a socially constructed phenomena that depends on the interpretation of the actors (Mackenzie & Knipe, 2006).

Ontology is the position and perception on the nature of social reality and phenomena (Wahyuni, 2012; Frankel et al., 2005). There are two distinct facets of ontology, objectivism, and constructivism. This research will adhere to objectivism, which suggests that the social phenomena is evident and is independent of the social actors and their interpretations of it (Bell et al., 2018). This research uses a combination of positivistic-objective approach to understand the contextual background of the research and interpret the phenomena under scrutiny. A deductive approach of research is used as the theoretical background of study already exists, hypotheses are developed and analysis is carried out to see whether the hypothesized relationships exists or not (Bell et al., 2018).

Research design for any study provides a framework for the collection and analysis of the data (Bell et al., 2018). For this study, a cross-sectional research design was deployed through a self-administered survey questionnaire. The use of cross-sectional research design allows the data collection at one point in time. As the survey doesn't require respondents' name, anonymity will be maintained and hence it is assumed that there is a higher probability of receiving accurate and honest responses. Pertaining to all the above-mentioned factors, cross-sectional research design with survey questionnaire is preferred for this study.

3.3 Sampling

The ICT sector of Pakistan is a dynamic and young industry which is growing at a rapid pace locally as well as globally (PSEB, 2019). This sector has been significantly contributing to the economy of Pakistan in terms of foreign exchange (from remittances), knowledge and inward technology transfers and foreign investments to state a few. Thus making it an interesting context to study (Khan & Lew, 2018). To test the hypothesized relationships, data was collected from the born-global SMEs of the ICT sector of Pakistan. There are two basic criteria for firms to meet in order to be characterized as born global, 1) they internationalization within 3 years of their inception, and 2) they must generate 25% of their revenue from international markets (Knight & Liesch, 2016; Cavusgil & Knight, 2015). The

sample was generated using a non-probability sampling technique known as snowball sampling. Snowball sampling technique yields a study sample through referrals among people who share or know of others who possess some characteristics that are of research interest (Bell et al., 2018; Biernacki & Waldorf, 1981). This technique was used to ensure that enough respondents are contacted to attain a desired sample size. Moreover, snowball sampling is preferred as it is assumed that the sample (top managers) is of a hard-to-reach respondents and would not be willing to provide information without any reference and assurance that the information they provide will be confidential and used anonymously (TenHouten, 2017).

A list of SMEs of ICT sector is accessed from the official website of Pakistan Software House Association (P@SHA). This list of ICT companies was used to identify relevant SMEs for this study. Firms were contacted and were asked whether they internationalized within 3 years of inception and earn 25% of their revenue from foreign markets. Firms that met the born-global criteria were requested to participate in this study. Furthermore, the respondents were requested to provide information or share the questionnaire with their colleagues who enjoy a similar status at an ICT firm as the respondent. Hence, in this way a snowball sampling procedure was used to expand the sample size. Due to cost and time constraints, SMEs that are based in major cities of Pakistan such as Lahore, Karachi, and Islamabad were included in the sample. The unit of analysis in this study was the firm but the unit of observation was top management including CEOs, COOs, and other senior managers (Calabró et al., 2017).

3.4 Data Collection Procedures

Survey questionnaires were administered from CEOs or senior managers of the born global ICT firms of Pakistan. The questionnaires were sent through e-mail, or were delivered in-person due to snowball sampling technique. The target respondents contacted through e-mail were given two reminders after a three weeks gap after that they were not contacted. The data gathered from the

respondents is based on the following assumptions: 1) The respondents filled out the questionnaire keeping in mind their organization's situation and practices; 2) A certain degree of familiarity with technical terms and jargons is expected from the respondents; and 3) Due diligence and honesty is expected from the respondents while filling out the questionnaire.

There is some consensus about the appropriate sample size, for a study where data has to be gathered from top management and unit of analysis is firm level, a sample size of 100-150 respondents is deemed appropriate. (Hair et al., 2017; Deutscher et al., 2016; Lonial & Carter, 2015). For this study, 250 companies were contacted, which resulted in 117 responses. Out of these 117 responses, five questionnaires were unusable, three were filled by respondents from the firms that were not born global SMEs and two questionnaires had missing values. Hence, a sample size of 112 born global SMEs operating in ICT sector of Pakistan was obtained.

3.5 Research Instruments

This study is composed of 4 major variables, human capital is the independent variable which is a first order construct, learning orientation is the mediator and internationalization is the dependent variable and both are second order constructs, whereas foreign alliance is the moderator which is a continuous variable.

3.5.1 Human Capital

The 5-item scale for measuring human capital was adopted from the work of Youndt & Snell, (2004) and it reflects the overall skills, knowledge, and expertise of employees of the firm. This construct is based on items that discuss the intellectual level, creativity, and skill set of employees. The examples of these items include, "Our employees are widely considered the best in our industry" or "Our employees are creative and bright."

3.5.2 Learning Orientation

To measure learning orientation, an 11-items scale based on three dimensions of commitment to learning, open mindedness and shared vision was used (Sinkula et al., 1997). The sub-construct of commitment to learning is assessed using four items that question about the extent of learning environment and encouragement provided by firms for learning such as “The basic values of this organization include learning as key to improvement.” Shared vision is measured using four items that are based on commonality of goal and organizational vision. One of the item of this construct questions employees’ commitment towards organizational goals, “All employees are committed to the goals of this organization.” Open-mindedness is tested using three items that test organization’s openness to learning and adopting new ways and criticizing its own beliefs which is depicted in the following item “Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned.” Learning orientation scale covers aspects related to continuous process of questioning beliefs, value of learning to organization and having a commonality of goals for greater good of the organization.

3.5.3 Foreign Alliances

Foreign alliances is a continuous variable that determines the number of foreign alliances a firm maintains with the expectation of developing a network in foreign markets. This variable was borrowed from the recent work of Li et al., (2018).

3.5.4 Internationalization

Internationalization comprises of two sub-scales, inward and outward internationalization (Zhou et al., 2007). Inward internationalization comprises of two items ranging from imports of technology, and utilization of management skills from foreign countries. Outward internationalization is measured using two items, based on how born-globals “aggressively seek foreign markets.” and their extent of efforts to “develop alliance with foreign partners.” A brief summary of the contents of these instruments is shown below.

Table 3.2: Summary of Instruments

Construct	Nature of Variable	Items	Scale	Author(s)
Human Capital	Independent Variable	4 Items	5-point agreement scale (1 = Strongly Disagree to 5 = Strongly Agree)	(Youndt & Snell, 2004)
Learning Orientation	Mediator Variable	11 Items	5-point agreement scale (1 = Strongly Disagree to 5 = Strongly Agree)	(Sinkula et al, 1997)
Foreign Alliances	Moderator Variable	1 Item	Continuous Variable	(Li et al., 2018)
Internationalization	Dependent Variable	4 Items	5-point agreement scale (1 = Strongly Disagree to 5 = Strongly Agree)	(Zhou et al., 2007)

3.5.5 Control Variables

For this thesis three control variables; firm performance, firm size and foreign market experience of owners were tested. Subjective firm performance has been used as a control variable in this model, since it is believed that better performing firms self select themselves into internationalization (Love & Roper, 2015; Wagner, 2007; Bernard & Jensen, 2004). Subjective firm performance measures the aspects of customer loyalty, product development costs, profitability and sales growth, which can influence firms strategic decisions, on a scale of 1 (much lower than competitors) to 5 (much higher than competitors) (Escribá-Esteve et al., 2008). Foreign market experience of owners and firm size are also considered to be as important control variables for the analysis (Javalgi & Todd, 2011; Contractor et al.,

2005; Contractor & Kundu, 2004). Firm size is measured as number of full time equivalent employees and foreign market experience of owners is measured as the number of years owner(s) have spent in foreign markets (Contractor & Kundu, 2004).

3.6 Data Analysis

A series of steps were carried out to establish credibility of the data. A preliminary analysis was conducted followed by a confirmatory factor analysis (CFA). After getting satisfactory results of CFA, a second stage-moderated mediation was conducted. The following discussion highlights the salient features of these techniques.

3.6.1 Preliminary analysis

Preliminary analysis was conducted to test for normality, and multicollinearity assumptions. The normality of the sample was tested using Q-Q plots, Variance inflation factors were used to determine the multicollinearity of the data. A sample profile is also discussed which includes the characteristics of the sample such as size of the firm, their location etc. Moreover, correlation among variables was calculated using Pearson's correlation matrix.

3.6.2 Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) is a procedure used to verify the hypothesized measurement model, i.e. the relationship between latent variable or factors (unobserved) and indicator (observed) variables. It basically measures how well the manifested variables measure the latent variables (Bell et al., 2018). There are a number of measures that ensure the model is appropriate, reliable and valid for a given sample. There are several indicators of goodness-of-fit, for this study Chi-square is used, CFI, IFI, and RMSEA. For this study, four basic reliability and validity measures were tested to ensure trustworthiness and authenticity of the measures. Reliability of a measure depicts that the construct produces similar results in different contexts. Reliability is measured using indicators' factor loadings which should be greater than 0.5, Cronbach's Alphas that should satisfy the benchmark

criteria of greater than 0.7 and lastly, Jorsekog rho should satisfy the criteria of greater than 0.6 (Hair et al., 2017; Hair et al., 2010; Fornell & Larcker, 1981).

The validity of the model is tested through two components (1) convergent validity, (2) discriminant validity (Farrell & Rudd, 2009). Convergent validity is measured by average variance extracted (AVE), which should be greater than 0.5 for the constructs and discriminant validity is calculated through average shared variance (ASV), and has to be less than AVE to yield satisfactory results (Fornell & Larcker, 1981). After testing for the above-mentioned criteria, the validity, and reliability of the proposed model was established.

3.6.3 Hypotheses Testing

To test the proposed hypothesis, a mediation, moderation and moderated mediation model was tested. A moderated mediation model, as the name suggests is composed of a moderator as well as a mediator in the same model. Mediation and moderation analyses can be analytically integrated into a unified statistical model using this approach (Hayes, 2015). A moderated mediation occurs when the indirect impact of mediator variable on dependent and independent variable varies according to the level of moderating variable. In other words, when mediation relations are contingent upon the level of moderating variables (Hayes, 2013; Edwards & Lambert, 2007; Preacher et al., 2007), provided the moderator has a non-zero weight in the function linking the mediator with the dependent and independent variables (Hayes, 2015). It is important that before conducting a moderated mediation analysis, there should be ample evidence that at least one of the paths in the mediation model ($X \rightarrow M \rightarrow Y$ system) is moderated (Hayes, 2015, Preacher et al., 2007).

A popular model that combines moderation and mediation is known as the second stage moderated mediation model (Edwards & Lambert, 2007), which allows the effect of M on Y in a mediation model to be moderated by W while fixing the effect of X on M to be unmoderated (Hayes, 2017; 2015). In this thesis, some cases in the literature review section are discussed that provide significant evidence about

the moderating role of strategic alliances in the relationship of learning orientation (*M*) and internationalization (*Y*). Thus validating the application of moderated mediation analysis.

3.7 Ethical Considerations

Keeping in view the sensitivity of information that was collected, it was ensured that the respondents were fully aware of the purpose of data collection and had no reservations to participate in the survey. For this purpose, a formal cover letter was sent along with questionnaire to address ethical concerns pertaining to anonymity, confidentiality, informed consent and fair use of data. In order to account for ex ante common method bias, respondents were ensured that the data/information provided by them would be kept confidential and presented anonymously at aggregate levels and will purely be used for research analysis purposes. Moreover, they were also given the option to withdraw from the survey at any point if they feel they can not or should not provide the requested information. Thus the data was only collected after the respondents had no reservations regarding anonymity, confidentiality, informed consent and fair use of data.

3.8 Conclusions

This chapter, in a step-by-step approach explains the research strategy, sample selection, and data collection procedure. This chapter elaborates that the data is collected through snowball sampling technique from born global SMEs regarding their human capital, learning orientation, foreign alliances, and internationalization. Moreover, it sheds light on the analysis techniques that will be used to analyze the data. It explains the tests for preliminary analysis of data, bivariate and multivariate analysis and their corresponding thresholds and criteria that needs to be met.

Chapter Four: Data Analysis and Findings

4.1 Introduction

In this chapter the data analysis procedures as suggested in Chapter 3 were used to test the proposed hypotheses and conceptual model. As a first step, preliminary analysis is conducted that comprises of sample characteristics such as normality tests conducted using Q-Q plots, variance inflation factor (VIF) to test for multi-collinearity. Second, descriptive statistics are presented as to showcase the mean and standard deviations of variables. Also, the Pearson correlation coefficients are presented as part of the bivariate analysis is presented. Finally, the multivariate analysis results are provided that comprises of confirmatory factor analysis (CFA) and hypotheses testing. In so doing, model fit indices, the reliability, validity and factor loadings of the constructs have been ascertained to conduct further tests of the proposed conceptual model. The results of model fit indices, chi-square, average variance extracted (AVE), Cronbach's Alpha, average shared variance (ASV) and Joreskog rho are reported in Section 4.3.1. Once the CFA yields satisfactory results, further investigation for the relationship testing was conducted and the results of hypothesis testing were reported. The Process macro is proposed by Andrew Hayes, (2015), which is used to assess the mediation, moderation and moderated mediation analysis. In sum, this chapter comprehensively presents results obtained from the sample of born-global SMEs.

4.2 Data Screening and Preliminary Statistics

A sample size of 117 questionnaires was obtained, out of which 5 were dropped pertaining to the fact that three questionnaires were filled by respondents from the firms that cannot be categorized as born global SMEs and two questionnaires had missing values. Consequently, the analysis was conducted on a sample of 112 questionnaires. All the firms included in the sample strictly followed the born global SME sampling criteria and belonged to the ICT sector of Pakistan. It is imperative to mention that only Pakistani originated born global SMEs were included in the sample of this study.

To graphically assess the normality of the data, quantile-quantile (Q-Q) plots were used. It is essential to meet the normality assumption before proceeding with further analysis. Below are the plots for the constructs of human capital, learning orientation and internationalization. From the data it can be observed that most of the observation are lying close to the diagonal line, which depicts that the data is almost normal, allowing us to conclude that the data satisfies the assumption of normality.

Figure 4.1: Q-Q Plot of Human Capital

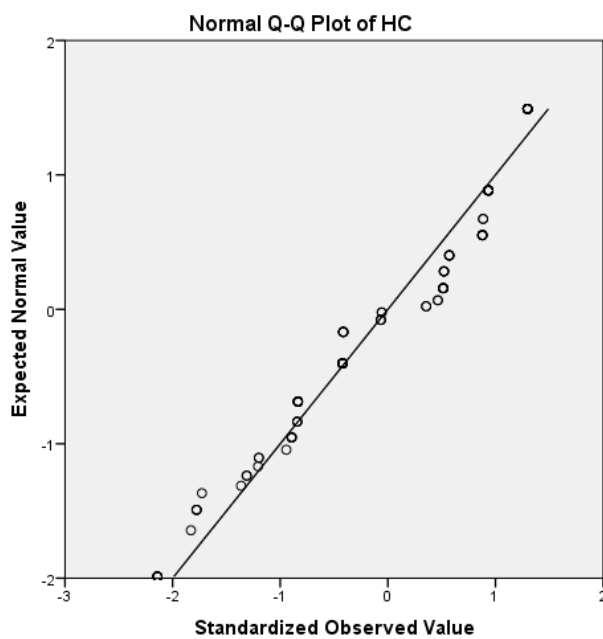


Figure 4.2: Q-Q Plot of Learning Orientation

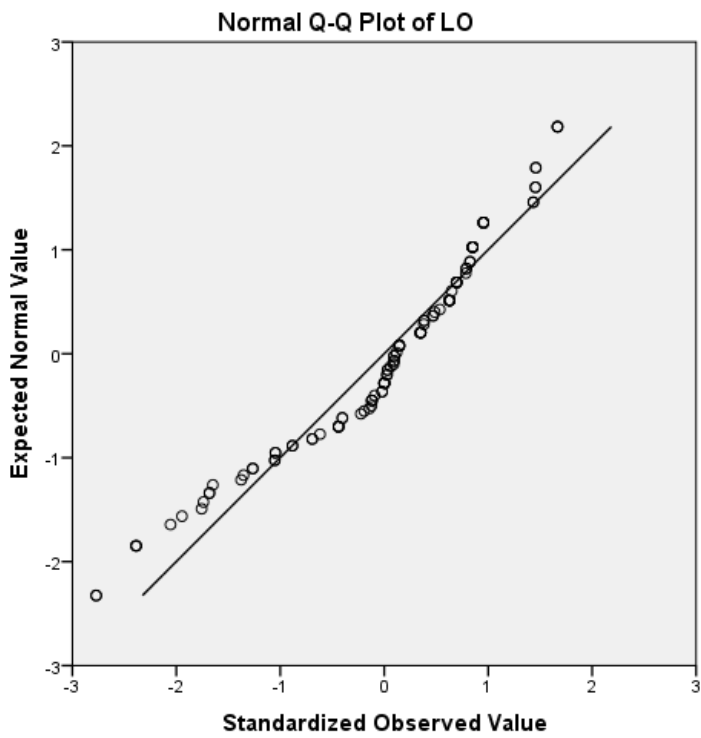


Figure 4.3: Q-Q Plot of internationalization

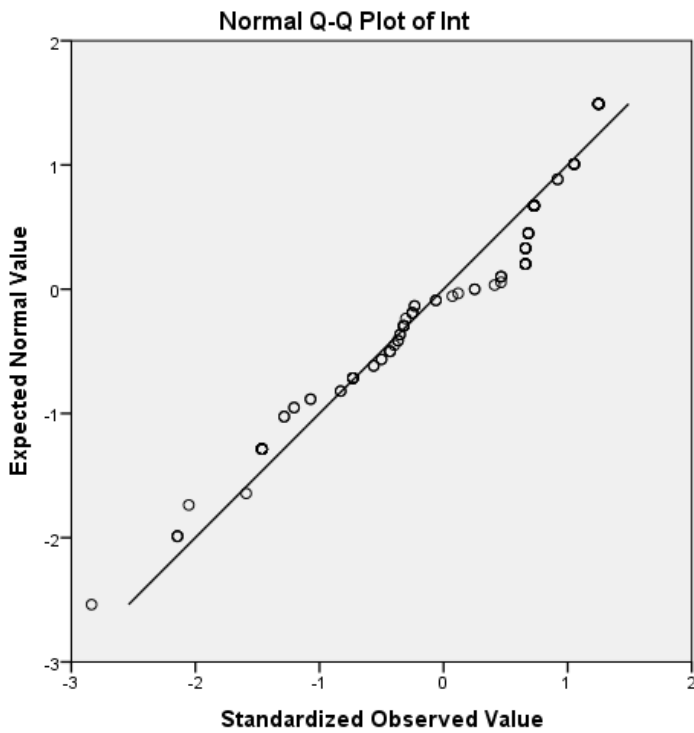
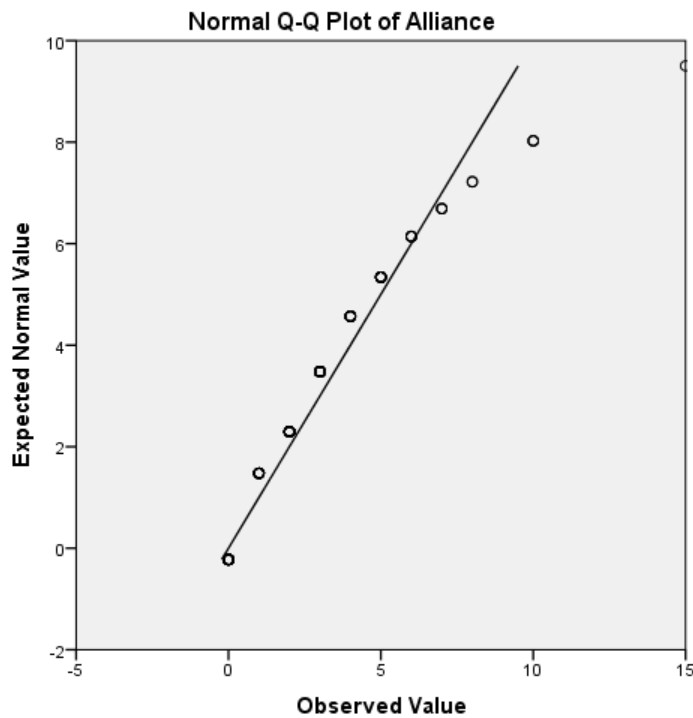


Figure 4.4: Q-Q Plot of Foreign Alliances



In order to check for multicollinearity, VIF scores were calculated for the variables. All VIF scores were below 10, suggesting that multicollinearity was not a serious problem for the proposed model (O’Brien, 2007).

Table 4.1: Tests for Multi-collinearity

Variables	VIF
Human Capital	1.713
Learning Orientation	1.690
Foreign Alliances	1.024

4.3 Descriptive statistics

The data collected from born-global SMEs suggested that 72% of the SMEs opt for internationalization with-in the first year of operations, 15% internationalized in the 2nd year and the

remaining 13% within the third year of operations. According to Small & medium enterprise authority (SMEDA), SMEs are characterized as having upto 250 employees, firms in the sample ranged from a minimum of 5 employees to a maximum of 250. Majority of the firms were characterized as private limited (58%), sole ownership (24%), and partnerships (18%).

The mean and standard deviations of the variables in the model are stated in the table below. Foreign alliances has the lowest mean and highest standard deviation of (M=2.6, SD=2.7). Learning orientation is composed of three sub-constructs; open-mindedness (M= 3.61, SD=0.788), shared vision (M= 3.74, SD=0.585) and lastly, commitment to learning (M=3.82, SD=0.715). Among the results portrayed in the table below, human capital has the highest mean and lowest standard deviation (M= 4.23, SD=0.57). Internationalization is based on exports (M=4.29, SD=0.8), and imports (M=3.88, SD=0.715).

Table 4.2: Mean and Standard Deviations of the Constructs

Constructs		Mean	Standard deviation
Human Capital		4.23	0.570
Foreign Alliances		2.6	2.7
Learning Orientation	Commitment to Learning	3.82	0.715
	Shared Vision	3.74	0.585
	Open mindedness	3.61	0.788
Internationalization	Imports	3.88	0.857
	Exports	4.29	0.80

The correlation between the variables is determined through Pearson correlation coefficients. The table depicts that the correlation between human capital and internationalization is ($r=0.409, p<0.01$), the correlation between human capital and learning orientation is high and positive ($r=0.639, p<0.01$). Similarly learning orientation and internationalization share a positive correlation ($r= 0.543, p<0.01$). Foreign alliances have a positive correlation with internationalization ($r=0.028, p<0.1$). Firm performance, foreign market experience of owners and firm size were deemed as important control variables for the analysis (Love & Roper, 2015; Javalgi & Todd, 2011; Wagner, 2007; Contractor et al., 2005; Herrmann & Datta, 2005; Contractor & Kundu, 2004). However, they were unrelated with the focal variables and hence were excluded from the final model (York, 2018).

Table 4.3: Pearson Correlation Coefficients

Correlations							
	1	2	3	4	5	6	7
1.Internationalization	1						
2.Human Capital	.409**	1					
3.Foreign Alliances	.028	-.153	1				
4. Learning Orientation	.543**	.639**	.100	1			
5.Performance	.029	.134	.180	.101	1		
6. Foreign Market Experience of Owner	-.075	-.022	.208*	-.009	-.133	1	
7. Size of Firm	-.135	-.228*	-.105	-.295**	-.108	.079	1
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

4.4 Multivariate Analysis

4.4.1 Results of Confirmatory Factor Analysis

In line with the discussion in the previous chapter, CFA was conducted in order to check the goodness of fit, reliability and validity of the variables being used in this study. CFA model of observed and unobserved variables is also known as measurement model, which was constructed and measured through SPSS and AMOS softwares version 23. The goodness of fit is assessed through a number of indices for this study. The following values of fit indexes were generated: chi-square = 257.525, degrees of freedom = 143, probability level = .000, CMIN/DF (ratio of chi square to degree of freedom) = 1.801. This is one of the most essential components of the fit indices and it indicates a reasonable fit of this model as its value is less than 3 (Hoe, 2008). Incremental fit index (IFI) = 0.874, Comparative fit index (CFI) = 0.87, Root mean square error of approximation (RMSEA) = 0.08. In a recent study, Hair et al. (2017) have argued that the goodness of fit indices (CFI, IFI) should be between 0.9 to 1 for perfect fit, however, most of the researchers have reported values of 0.85 that is usually considered as an appropriate fit (Hair et al., 2017; Schreiber et al., 2006). Likewise, values for RMSEA has ranged from 0 to 0.22 with an average of 0.081 as argued by Hair et al. (2017). Moreover, a value of 0.08 for RMSEA indicates a satisfactory fit (Hoe, 2008). These statistics provide evidence that the RMSEA along with model fit indices provide a satisfactory fit of the overall model. The table 4.4 presents the results along with the cutoff criteria.

Table 4.4: Model fit summary (Measurement Model)

Model Fit Index	Cutoff criteria	Model Estimate
CMIN/DF	$\leq 1-3$	1.80
IFI	≥ 0.9	0.87
CFI	≥ 0.9	0.87
RMSEA	> 0.09	0.08

The reliability and validity of variables was measured using the values of factor loadings of indicators and correlations among the variables in Microsoft Excel spreadsheet made by Michael Korchia. Reliabilities were computed to test how closely related sets of items are as a group (Hair et al., 2011; Field, 2009). Factor loadings express the relation of each variable with its underlying factor. For factors/items to form a latent construct the factor loadings have to be greater than 0.5 (Hair et al., 2010), items with factor loadings less than 0.5 were excluded from the model as indicated in the following Table 4.5.

Table 4.5: Factor Loadings of Latent Constructs

Indicators	Factor Loadings	1st order Constructs	Factor Loadings	2nd order Constructs
HC1	0.710	Human Capital		
HC2	0.756			
HC3	0.861			
HC4	0.753			
HC5	Dropped			
LCL1	0.658	Commitment to Learning	0.869	Learning Orientation
LCL2	0.790			
LCL3	0.621			
LCL4	0.834			
LOM1	0.682	Open mindedness	0.901	
LOM2	0.796			
LOM3	0.770			
LSV1	0.833	Shared Vision	0.929	
LSV2	0.738			
LSV3	0.585			
LSV4	0.501			
I1	0.552	Imports	0.961	Internationalization
I2	0.534			
I3	Dropped			
E1	0.575	Exports	0.509	
E2	0.761			

Fornell & Larcker (1981) suggest that a variable is reliable if it produces the Joreskog rho value greater than 0.6. Moreover, Cronbach's alpha is also used as a measure of reliability or more specifically internal consistency; values above 0.7 indicate that the results are reliable (Hair et al., 2010). Satisfactory values of Cronbach's alphas suggest that scales adopted from literature to operationalize constructs in this thesis are reliable as shown in Table 4.6.

Construct validity is composed of two components; convergent validity and discriminant validity. The convergent validity ascertains the convergences of individual items on their theorized constructs. Conversely, the discriminant validity measures the extent to which individual items of constructs distinguish from one another (Verreyne et al., 2016; Farrell & Rudd, 2009). Establishing construct validity is important, because if the included measures are not valid then the results generated by analyzing data using those measures will be questionable (Farrell & Rudd, 2009). Convergent validity is measured by average variance extracted (AVE). Hair et al., (2017) & Fornell & Larcker, (1981) suggested that a latent construct holds convergent validity if it produces the value of average variance extracted (AVE) greater than 0.5 and holds discriminant validity if its value of average shared variance (ASV) is less than AVE. The variables of this study met the criteria for both convergent validity and discriminant validity as shown in Table 4.4. Also, Table 4.6 illustrates the values of Cronbach's alpha, Joreskog rho, AVE and ASV indicating that the measurement model met the validity and reliability criteria.

Table 4.6: Reliability and Validity of Latent Constructs

Constructs	Cronbach's Alpha	Joreskog rho	AVE	ASV
Human Capital	0.817	0.825	0.546	0.27
Learning Orientation	0.902	0.951	0.867	0.139
Internationalization	0.702	0.722	0.588	0.226

4.4.2 Results of Hypotheses Testing

This study is based on mediation, moderation, and second stage moderated mediation models that were performed to test the proposed hypothesis in Chapter 2. The proposed model was estimated using SPSS multiple linear regression and Process macro by Hayes. Factor scores for the internationalization, human capital, learning orientation, and firm performance were used to conduct the analysis, as these were the latent variables.

Hypothesis 1 was tested using multiple linear regression in SPSS (version 23). The independent variable (internationalization) was used for the regression analysis. The results indicate that human capital has a direct significant relationship with internationalization ($\beta=0.452$, $P=0.000$). The overall model fit for the regression was statistically significant ($F(1,110)=28.235$, $p < 0.000$) with value of R^2 indicating that 20.4% of the variation in the dependent variable caused by independent variable and control variable. Hence, providing ample evidence to accept hypothesis 1. Table 4.7 shows regression results.

Table 4.7: Results of Regression Analysis

Dependent Variable	
Variable(s)	Internationalization
Independent Variable	
Human Capital	0.452***
R²	0.204
Adjusted R²	0.197
F	28.235***
*** $p < 0.01$	

To test for hypothesis 2_a, the effect of human capital on learning orientation is tested. The effect is positive and significant ($\beta_1 = 0.593$, $p = 0.000$) and confirms the proposed relationship of H_{2a}. Moreover, the impact of learning orientation on internationalization is calculated, ($\beta_2 = 0.5118$, $p = 0.000$), proving H_{2b} holds.

To test the hypothesis 2_c, mediation analysis was conducted. Based on the results, the direct impact of human capital on internationalization is insignificant, ($c' = 0.1055, p = 0.3134$). As can be seen in table 4.8 below, that indirect effect is significant and direct effect is insignificant, contributing to the evidence for an indirect only mediation (Zhao et al., 2010). Hence, it can be concluded that hypothesis H_{2c} is accepted which stated that learning orientation mediates the positive relationship between human capital and internationalization.

Table 4.8: Results of Mediation Analysis.

Relationship		Coefficients	95% CI
Human Capital → Internationalization (Direct Effect)	c'	0.1052 (0.1046)	(-.1021, 0.3125)
Human Capital → Learning Orientation → Internationalization (Total Indirect Effect)	$\beta_1 * \beta_2$	0.3041 (0.0879)	(0.1213, 0.4734)

The number of foreign alliances is proposed to moderate the relationship between learning orientation and internationalization. Foreign alliance significantly impact internationalization ($\beta = 0.0583, p = 0.0625$). Combined together, learning orientation and foreign alliances have a significant interaction effect on the internationalization of born global SMEs ($\beta = 0.0767, p = 0.0099$), Table 4.9 shows the effect of learning orientation on internationalization at different values of moderator, such that at higher values of moderator the impact of learning orientation on internationalization is strengthened, (H₃ is supported).

Table 4.9: Results of Moderation Analysis.

Level of Moderator	Estimates	BootSE	BootLLCI	BootULCI
Low	0.3961	0.1130	0.1721	0.6202
Med	0.5495	0.0861	0.3789	0.7202
High	0.7796	0.1103	0.5611	0.9982

The fourth and most important component that is measured is the combined impact of moderator and mediator as moderated mediation on the internationalization of born global SMEs. The beta coefficient for the interaction effect of moderator and mediator yields significant coefficient, ($\beta_4 = 0.0791, p = .0077$). This is also known as the test of highest order unconditional interaction. It signifies that the indirect effect of human capital on internationalization through learning orientation is dependent upon foreign alliances. By the reasoning, that evidence of moderation of one of the links in a mediation model is sufficient to claim moderation of mediation (Hayes, 2015). This analysis supports the conclusion that the indirect effect of human capital on internationalization through learning orientation depends on foreign alliances of firm therefore H₄ is supported.

As per the PROCESS macro, the values of moderator can be divided into three intervals, which are valued at 1 standard deviation below mean, at mean and 1 standard deviation above mean (Hayes, 2015). If the indirect effect is moderated, then any two conditional indirect effects estimated at different values of the moderator are significantly different from each other (Hayes, 2015). It has been established that the moderated mediation at mean and +1 of standard deviation above mean is significant, as depicted in the following Table 4.10. These findings indicate that at lower level of foreign alliances the indirect relationship between human capital and internationalization cannot be facilitated through learning orientation unless and until firms maintain an average or higher levels of foreign alliances.

Table 4.10 Conditional Indirect Effects of Human Capital on Internationalization

Level of Moderator	Estimates	BootSE	BootLLCI	BootULCI
Low	0.1763	0.1120	-0.0671	0.3736
Med	0.3024	0.0873	0.1216	0.4677
High	0.4284	0.1020	0.2363	0.6347

Last, a bootstrap confidence interval for the index of moderated mediation, which is the slope of indirect effect function and it does not include zero provides more direct and definitive evidence of moderated mediation (Hayes, 2015). The positive slope of indirect effect shows that for all meaningful values of V, the indirect effect will be an upward sloping line. Hence, the indirect effect of human capital on internationalization through learning orientation is an increasing function of foreign alliances. Table 4.11 below exhibits the value of the index which is the same as the value of slope coefficient of the indirect effect along with the standard error and a 95% CI that does not include zero. The index of moderated mediation reveals that the overall model is significant, providing evidence in the support of H₄. As per H₄, it is suggested that number of foreign alliances moderate the positive indirect effect of human capital on internationalization through learning orientation such that with higher number of foreign alliances the indirect effect is also higher.

Table 4.11: Index of Moderated Mediation

Foreign Alliances	Index	BootSE	BootLLCI	BootULCI
	0.0469	0.0231	0.0088	0.1004

The table 4.12 depicts the summary of hypothesis that were supported and not supported based on the data analysis presented in this section.

Table 4.12: Hypotheses Results

Hypotheses	Decision
H1: Human capital positively impacts the internationalization of born-global SMEs.	Supported
H _{2a} : Human capital is positively associated to learning orientation of born-global SMEs.	Supported
H _{2b} : Learning orientation is positively related to the internationalization of born-global SMEs.	Supported
H _{2c} : Learning orientation mediates the positive relationship between human capital and internationalization of born-global SMEs.	Supported
H ₃ : Foreign alliances moderate the relationship between learning orientation and internationalization of born-global SMEs.	Supported
H ₄ : Foreign alliances moderates the positive indirect effect of human capital on internationalization through learning orientation such that at higher level of foreign alliances the indirect effect can be higher.	Supported

4.5 Conclusions

This chapter sums up the results obtained by using a series of univariate, bivariate and multivariate analyses, which have yielded satisfactory results. The firms included in the sample of this study have satisfied the SME born-global criterion. The data satisfies the normality and multicollinearity assumptions for further analysis. Moreover, the data is systematically analyzed using AMOS and SPSS for establishing its validity and reliability prior to hypothesis testing. Hypotheses were tested through PROCESS macro that is developed by Hayes, (2015). The analysis shows that human capital has an indirect effect on internationalization through learning orientation, providing evidence for acceptance of H_{2c}. The hypothesis (H₃), regarding the moderating effect of foreign alliances on the relationship between learning orientation and internationalization is also accepted based on the empirical

evidence presented in table 4.9. Lastly, the indirect effect of human capital on internationalization through learning orientation at moderate and high level of foreign alliances is also accepted (H₄).

Chapter Five: Conclusions and Implications

5.1 Introduction

This research examined the relevance of RBV and network theory regarding the internationalization of born global SMEs. The conceptual model presented in Chapter 2 and analyzed in Chapter 4, explicates the role of human capital for the internationalization of born-global SMEs through an underlying mechanism of learning orientation in the presence of higher level of foreign alliances. Section 5.3 discusses the theoretical implications of this research. Taking this discussion forward, a number of practical implications both for practitioners and policy makers are presented in Section 5.4. No research can be without limitations, there are a few areas in this research can be improved and these are discussed as the limitations along with the future research directions in Section 5.5.

5.2 Discussion about the Internationalization of Born global SMEs

Internationalization of SMEs has attracted significant attention of researchers in literature and remains one of the important areas to study (Falahat et al., 2018; Knight & Liesch, 2016). With advances in information and communication technologies and other facilitating trends, more SMEs have been acting in international markets than ever before (Haase & Franco, 2011; Fletcher, 2004). Pakistan, considered an emerging market, is expanding its global presence in ICT industry (Khan & Lew, 2018). Focusing on born-global SMEs of Pakistan, this study offers several important insights for the internationalization of born-global SMEs.

The research findings emphasize the relevance of the RBV and network theory through the juxtaposition of human capital, learning orientation and number of foreign alliances for the internationalization of born global SMEs in the developing market of Pakistan. As per the RBV, these facets of valuable, rare, inimitable, and non-substitutable resources allow firms to implement efficient strategies (Barney, 1991) and enable firms to lower prices and drive market expansion (Nason & Wilkund, 2018). Furthermore, this study integrates the RBV and network theory to explicate the

internationalization of born global SMEs. In so doing, this study has conceptualized and tested a model that encapsulates the pertinence of both internal (human capital and learning orientation) and external (number of foreign alliances) resources for the internationalization of born-global SMEs.

As discussed earlier in Chapter Two, it has been widely argued that the development and growth of young technology-based firms are particularly dependent upon innovatively combining their firm-specific knowledge with their external partners because young firms are resource constrained (McDougall, Shane, & Oviatt, 1994). The knowledge embedded in the internal resources such as human capital and learning orientation is exclusive to the firm only and so are its associated benefits (Gerschewski et al., 2015; Kogut & Zander, 1992). Likewise, firms maintain network ties and/or alliances with a mutual idea of sharing resources, opportunities and valuable information among members of the network (Falahat et al., 2018; Felzensztein et al., 2015; Adler & Kwon, 2002; Lin, 2001). This research argues that young firms may develop social capital (in the form of foreign alliances) as a strategy to aid in acquiring new knowledge (Welch, 2015; Yli-Renko et al., 2001). These capabilities are accumulated and developed over time and cannot simply be bought or acquired (Subramaniam & Youndt, 2005; Hatch & Dyer, 2004). Thus, all these organizational resources and capabilities are unique to the firm and their optimal use results in competitive advantage when firm implements strategies that create value which other companies cannot efficiently replicate.

It goes without saying that there has been a dearth of research that has postulated and tested the role of human capital as an antecedent of internationalization of born-global SMEs as most of the researchers have focused on performance as a consequence of human capital (Onkeline et al., 2016a; 2016b; Marvel et al., 2016; Crook et al., 2001). This study has demonstrated the indirect effect of human capital on internationalization through learning orientation and subsequently checks how does that indirect effect varies with the level of foreign alliance of born-global SMEs. Data was collected from born-global SMEs of ICT sector of Pakistan. Using multidimensional scales of human capital, learning orientation, internationalization, and a continuous measure for foreign alliances, a sample size of 112

born-global SMEs was obtained to conduct the analysis.

The findings of the study indicate that knowledge embedded in organization due to its human capital is an excellent source leveraged by SMEs to tap into foreign markets. Also, the knowledge creation and absorption in a firm are usually embedded in a firm's processes, routines, and memories representing learning orientation (Hitt et al., 2001; Walsh & Ungson, 1991). When born-global firms enter foreign business environments, they must quickly build the capabilities necessary to obtain a competitive position. Learning orientation enables them to adapt and grow in such an environment and to achieve the aim to internationalize rapidly by preparing firms for a fast-changing international business environment (Kungwansupaph & Siengthai, 2014). The findings of this study have shown that ICT sector SMEs need to make efforts to leverage their human capital for enhancing their learning orientation in order to internationalize.

In addition to the set of internal resources, modern firms are born to operate in a globalized world. With respect to the globalization, the social capital is another valuable, rare and inimitable external resource capable of not only providing privileged access to information (Nahapiet & Ghoshal, 1998), but it also connects external resources embedded in networks to firm-level resources. This thesis indicates that the level of foreign alliances provide born-global firms with opportunities for new businesses and are considered more prominent for their rapid internationalization (Li et al., 2018). The born-global firms, that rapidly and widely develop networks or alliances have been able to achieve global reach quickly and expediting their simultaneous access to multiple foreign markets (Rialp et al., 2005; Chetty & Campbell-Hunt, 2004). Acquiring network connections also provides capability to generate ideas for the development of knowledge-intensive products, as well as specific knowledge pertaining to customer preferences and how international markets can be targeted and properly satisfied (Falahat et al., 2018). However, such alliances need to be underpinned by the different types of knowledge resources as human capital and learning orientation (Suseno & Pinnington, 2018). In essence, foreign alliances exemplify flexible conduits for the sharing and exchange of knowledge and

hence act as a facilitator to strengthen how human capital and learning orientation are leveraged in organizations (Subramaniam & Youndt, 2005) to achieve rapid internationalization.

5.3 Theoretical Implications

The research that is intended to explore the actual bundles of capabilities that make emerging economy born global SMEs internationalize is still in embryonic phase (Knight, 2015; Welch, 2015; Felzensztein et al., 2015; Cavusgil & Knight, 2009; Gassmann & Keupp, 2007; Knight & Cavusgil, 2004). This study has borrowed the lens of the RBV of the firm and extends this theory to the underexplored aspects of born-global SMEs' internationalization by examining the influence of firm's internal and external resources on firm internationalization (Falahat et al., 2018; Knight & Liesch, 2016; Knight, 2015). In so doing, the RBV has been integrated with social network theory in order to analyze the internationalization of born global SMEs (Morais & Franco, 2018; Spence & Crick, 2006; Rialp et al., 2005).

Researchers have suggested that human capital and learning orientation are related concepts as human capital facilitates the knowledge creation and accumulation in the firm (Youndt & Snell, 2004). The subject of human capital's influence on learning orientation is still less explored (Kungwansupaph & Siengthai, 2014). This study extends prior research by examining the relationship between employee human capital, and learning orientation, specifically in the context of born-global SMEs. This research has shed light on the mechanism through which resources can be mobilized to create knowledge in an organization, how it is developed and then finally leveraged to reach the ultimate goal of attaining competitive advantage in the global markets. The resources need to be carefully regulated, as by themselves they do not confer a persistent competitive advantage (Barney, 1991). Thus, it can be argued that when firms possess a variety of capabilities such as human capital, learning orientation, and foreign alliances, a strategic combination of these internal and external resources creates competitive advantage for the firm in a global market (Tabares et al., 2016; Welch, 2015). In sum, the findings of this study

emphasize the collocation of RBV and network theory for understanding the internationalization of born global SMEs.

5.4 Practical Implications

Taken together, these findings have important implications that not only enhance and refine conceptualizations of the role of internal and external resources in internationalization, but also offer useful and specific guidelines for the owners and managers of born global SMEs. There is no denying in the fact that the acquisition of skilled human capital is the necessary condition for the internationalization of born global SMEs of the ICT sector in a developing economy like Pakistan. Thus, the firm that needs to internationalize since its inception requires to heavily invest in the development of its human capital. These investments of time and money in employees can enhance a human capital that can be beneficial for rapid internationalization. Investments in human capital also play a pivotal role in enhancing a firm's learning orientation. Focus on developing learning capabilities of the firm are important as they enable rapid responses to complex and uncertain situations.

As the results point towards the importance of foreign alliances for born global SMEs which is proven to be a decisive factor for their internationalization. Moreover, in order to reap the benefits of learning orientation the firms need to maintain higher number of foreign alliances because low level of alliances would not make any significant contribution towards the indirect link between human capital and internationalization. Hence, SMEs need to pay attention and invest more in their social relationships and networks. These social relations actually help in dealing with a lot of uncertainty associated with foreign markets. Thus, top managers should adopt such strategies that stimulate the firm's expansion in the external market through alliances.

5.5 Limitations and Future Research Directions

Nevertheless, this study has several limitations. The first limitation of this research is the 'culture

effect'. SME usually display a national style of management, since the data for this research has been collected from Pakistan only then the generalizability of this study is limited to the Pakistani context (Haase & Franco, 2011). Thus, a comparative study is recommended. Another concern is regarding the snowball sampling and the limited sample size. Due to the exclusive nature of respondents (CEOs, senior managers) and characterization of firms as born-global, it would have been difficult to conduct a probability sampling technique and obtain a larger sample size. Future studies can be conducted through probability sampling technique. Survivor bias might also be a limitation in this case; as the of sample of this research only includes born-global SMEs that have survived, and it may be possible that different relationships would emerge if failed firms had been included in the sample (Clercq et al., 2008; Yli-Renko et al., 2001).

This study has followed a cross-sectional research design to collect data; future studies may use a longitudinal research design to establish causal relationships and find evidence of how these relationships evolve over time. Investigation of this study is limited to the impact of human capital on internationalization only; future research may explore performance of born-global SMEs after internationalization. Following a longitudinal design, it would also be interesting to note any variation in born-global firm performance before and after internationalization. Moreover, researchers can use latent constructs for social capital that encompass numerous types of affiliations and relationships rather than using a single item measure as a proxy for social capital. Different types of network ties with managers, customers, and governments can be used to examine their relevance for internationalization of SMEs. This study only focused on the ICT sector, it would also be interesting to undertake a multiple-group analysis to compare the results across different industrial sectors.

5.6 Conclusions

From this thesis, it can be concluded that the human capital, foreign alliances, and learning orientation are not only relevant as individual resources for the internationalization of born global SMEs but the juxtaposition of these internal and external resources play vital role through the accumulation and distribution of knowledge within the organization. The findings of this study demonstrate the impeccable role of learning orientation in enhancing the role of human capital for firm internationalization. Apart from internal resources of the firm, this study also illustrate that external resources such as foreign alliances can positively affect the internationalization of SMEs of the ICT sector of a developing economy. It has been established that human capital of the firm can pave way for its internationalization through learning orientation and this relationship becomes more profound when a particular firm has higher level of foreign alliances or at least equal to the average number of foreign alliances compared to its counterparts. Thus, this research provides a holistic view of *how* and *when* the constellation of internal and external resources paves way for the internationalization of born global SMEs of the ICT sector.

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Appendix A

Questionnaire

Please check only one option, which may seem appropriate to you. I request you to please answer all the questions. Thank you

SECTION I

- ❖ Please indicate the number of employees in your organization. _____
- ❖ Please indicate the time since the firms has started its foreign market operations after its inception
_____ {months or years}.
- ❖ Please indicate the foreign market experience of owners prior to starting the firm
_____ {months or years}.
- ❖ How many formal alliances your firm has established in foreign markets.

- ❖ Please indicate the ownership structure of your firm?
o Sole ownership o Partnership o Private Limited

SECTION II

Human Capital Scale	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
Our employees are experts in their particular job and functions.	5	4	3	2	1
Our employees are widely considered the best in our industry.	5	4	3	2	1
Our employees are highly skilled.	5	4	3	2	1
Our employees are creative and bright	5	4	3	2	1

SECTION III

Internationalization					
<i>If your firm imports from foreign markets, please answer the following.</i>					
	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
Utilized advanced management skills from foreign country.	5	4	3	2	1
Utilized advanced and new technology from foreign countries.	5	4	3	2	1
<i>If your firm exports to foreign markets, please answer the following</i>					
	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
Aggressively seek foreign markets.	5	4	3	2	1
Develop alliances with foreign partners	5	4	3	2	1

SECTION IV

Learning Orientation Scale	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
Managers basically agree that our organization's ability to learn is the key to our competitive advantage.	5	4	3	2	1
The basic values of this organization include learning as key to improvement	5	4	3	2	1
The sense around here is that employee learning is an investment, not an expense	5	4	3	2	1
Learning in my organization is seen as a key commodity necessary to guarantee organizational survival.	5	4	3	2	1
There is a commonality of purpose in my organization.	5	4	3	2	1
There is total agreement on our organizational vision across all levels, functions, and divisions.	5	4	3	2	1
All employees are committed to the goals of this organization.	5	4	3	2	1
Employees view themselves as partners in charting the direction of the organization	5	4	3	2	1
We are not afraid to reflect critically on the shared assumptions that we have made about our customers	5	4	3	2	1

Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned.	5	4	3	2	1
We rarely collectively question our own biases about the way we interpret customer information	5	4	3	2	1

SECTION V

Firm Performance	Much Lower Than Competitors	Lower Than Competitors	About The Same	Higher Than Competitors	Much Higher Than Competitors
Profitability of sales	1	2	3	4	5
Market share	1	2	3	4	5
Degree of loyalty of customers	1	2	3	4	5
Annual sales growth rate	1	2	3	4	5
Product improvement and development costs	1	2	3	4	5

Appendix B

Table 1B: Categorization of IT and ITeS companies by PSEB

Sr #	Category	Description
1	Call Centers	Services provided by Call Centers
2	Hardware Consultancy Services	Computer hardware consultancy services provided to non-residents
3	Software Consultancy Services	Database services provided to non-residents such as development, storage, and on-line times series. Also included are the database processing services provided to non-residents
4	Maintenance and Repair of Computers	Maintenance and repair of computers and peripheral equipment abroad to non-residents
5	Export of Computer Software	Export of computer software including design, development, and programming of customized system
6	Other Computer Services	Other computer services not specified elsewhere

Table 2B: Trade in Services (Imports and Exports of Telecommunications, Computer, and information services)

Trade in Services (Thousand USD)	FY17 ^R		
	Credit	Debit	Net
9. Telecommunications, Computer, and information services	939,510	384,090	555,420
9.1 Telecommunications services	365,770	106,110	259,660
9.1.1 Call centers	82,859	111	82,748
9.1.2 Telecommunication services	282,911	105,999	176,912
9.2 Computer services	572,190	262,700	309,490
9.2.1 Hardware consultancy services	3,442	524	2,918
9.2.2 Software consultancy services	227,260	193,320	33,940
9.2.3 Maintenance & repairs of computer	730	9,596	-8,866
9.2.4 Export / Import of Computer Software	264,392	49,197	215,195
9.2.5 Other Computer services	76,366	10,063	66,303
9.3 Information services	1,550	15,280	-13,730
9.3.1 News agency services	1,012	11,692	-10,680
9.3.2 Other information services	538	3,588	-3,050

Table 3B: Summary of Relevant Articles from Literature

Sr #	Author, and Year	Firm Type	Dependent Variable	Other Variables
1	Youndt & Snell, 2004	Multiple	1-Organizational performance	1-Oragnizational Capital 2- Social Capital, 3- Human Capital
2	Subramaniam & Youndt, 2005	Multiple	Incremental and radical innovation	1-Oragnizational Capital 2- Social Capital, 3- Human Capital
3	Onkelinx et al., 2016	SMEs	1-Degree of Internationalization	1-Human Capital, 2- Interntionalization Strategy, 3- Labour Productivity.
4	Kungwansupaph & Siengthai, 2014	Early internationalizing firm (EIF)	Learning Orientation	Various components of Human Capital such as 1-International business skill, 2-International business knowledge, 3-Entrepreneurial competence, 4-Managerial competence
5	Cavusgil & Knight, 2015	Born global SMEs	1- Internationalization	Various antecedents of internationalization
6	Welch, 2015	Internationalizing firms	1-Internationalization	1-Networks 2-Knowledge 3-Role of information
7	Khan & Lew, 2018	Software INVs	1-Survival of international new ventures (INVs)	1-Entrepreneurial orientations and network development capabilities 2-Specialized product focus and niche market development 3-Transformation and renewal capabilities
8	Rialp, Rialp, Urbano, & Vaillant, 2005	SMEs	1-International Entrepreneurship	1-Born global Vs Incremental internationalization
9	Kropp, et al., 2006	International Entrepreneurial Business Ventures (early stage, growth - oriented firms)	1-Business venture performance	1-Enterpreneurial Orientation 2-Market Orientation 3- Learning Orientation

Sr #	Author, and Year	Firm Type	Dependent Variable	Other Variables
10	Lin, 2001	n/a	n/a	n/a
11	Knight & Liesch, 2016	Born-global SMEs	1-Internationalization of Born global SMEs	n/a
12	Morais & Franco, 2018	SMEs	1-Cooperative alliances	1- Internationalization
13	Yli-Renko et al., 2002	SMEs	1-International growth	1- Internal and external Social Capital
14	Li et al., 2018	Domestic VS International SMEs	1-Financial Resources 2-Intellectual Resources	1-Technological capability 2-Alliance capability
15	Ruokonen, & Saarenketo, 2009	Software Companies	1-Internationalization	1-Entrepreneurial Orientation 2-Market Orientation 3- Learning Orientation
16	Clercq et al., 2005	SMEs	1-Internationalization intent	1-International learning effort 2- Domestic learning effort 3- Entrepreneurial Orientation
17	Rocha et al., 2012	SMEs	1-International commitment	1-Resource availability 2-Goal congruence 3- Entrepreneur's desire to internationalize 4- Family attitude
18	Fletcher, 2004	SMEs	1-Internationalization	1- Entrepreneurial Orientation

Output of Mediation Analysis

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.1 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 4
 Y : Internat
 X : HumanCap
 M : lo

Sample
 Size: 112

OUTCOME VARIABLE:
 lo

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6390	.4084	.5145	75.9241	1.0000	110.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.0000	.0678	.0000	1.0000	-.1343	.1343
HumanCap	.5932	.0681	8.7134	.0000	.4583	.7281

OUTCOME VARIABLE:
 Internat

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5485	.3009	.7119	23.4573	2.0000	109.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.0000	.0797	.0000	1.0000	-.1580	.1580
HumanCap	.1055	.1041	1.0129	.3134	-.1009	.3118
lo	.5118	.1122	4.5633	.0000	.2895	.7341

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
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.1055 .1041 1.0129 .3134 -.1009 .3118

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
lo	.3036	.0869	.1208	.4657

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: Variables names longer than eight characters can produce incorrect output.
Shorter variable names are recommended.

----- END MATRIX -----

Output of Moderation Analysis

***** PROCESS Procedure for SPSS Version 3.3 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 1
Y : Inter
X : lo
W : FA

Sample
Size: 112

OUTCOME VARIABLE:
Inter

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.5858	.3432	.6751	18.8093	3.0000	108.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	-.1376	.1123	-1.2260	.2229	-.3602	.0849
lo	.3961	.1130	3.5050	.0007	.1721	.6202
FA	.0583	.0310	1.8819	.0625	-.0031	.1197

Int_1 .0767 .0292 2.6260 .0099 .0188 .1346

Product terms key:

Int_1 : LO x FA

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0419	6.8957	1.0000	108.0000	.0099

Focal predict: lo (X)
Mod var: FA (W)

Conditional effects of the focal predictor at values of the moderator(s):

FA	Effect	se	t	p	LLCI	ULCI
.0000	.3961	.1130	3.5050	.0007	.1721	.6202
2.0000	.5495	.0861	6.3845	.0000	.3789	.7202
5.0000	.7796	.1103	7.0711	.0000	.5611	.9982

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

----- END MATRIX -----

Output of Moderated Mediation Analysis

Model : 14
Y : Internat
X : HumanCap
M : learnO
W : Alliance

Sample
Size: 112

OUTCOME VARIABLE:
learnO

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6390	.4084	.5145	75.9241	1.0000	110.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.0000	.0678	.0000	1.0000	-.1343	.1343
HumanCap	.5932	.0681	8.7134	.0000	.4583	.7281

OUTCOME VARIABLE:
 Internat

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5950	.3541	.6701	14.6624	4.0000	107.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.0196	.0777	.2522	.8014	-.1344	.1736
HumanCap	.1368	.1019	1.3426	.1823	-.0652	.3388
learnO	.5097	.1088	4.6839	.0000	.2940	.7254
Alliance	.0637	.0311	2.0471	.0431	.0020	.1254
Int_1	.0791	.0292	2.7142	.0077	.0213	.1369

Product terms key:

Int_1 : learnO x Alliance

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
M*W	.0445	7.3670	1.0000	107.0000	.0077

Focal predict: learnO (M)
 Mod var: Alliance (W)

Conditional effects of the focal predictor at values of the moderator(s):

Alliance	Effect	se	t	p	LLCI	ULCI
-2.6847	.2972	.1346	2.2082	.0294	.0304	.5641
.0000	.5097	.1088	4.6839	.0000	.2940	.7254
2.6847	.7222	.1335	5.4098	.0000	.4575	.9868

***** DIRECT AND INDIRECT EFFECTS OF X ON Y

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.1368	.1019	1.3426	.1823	-.0652	.3388

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

HumanCap -> learnO -> Internat

Alliance	Effect	BootSE	BootLLCI	BootULCI
-2.6847	.1763	.1120	-.0671	.3736
.0000	.3024	.0873	.1216	.4677
2.6847	.4284	.1020	.2363	.6347

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
Alliance	.0469	.0231	.0088	.1004

***** ANALYSIS NOTES AND ERRORS*****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence
intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: The following variables were mean centered prior to analysis:
Alliance learnO

NOTE: Variables names longer than eight characters can produce
incorrect output.
Shorter variable names are recommended.

----- END MATRIX -----