

**Entrepreneurial Orientation as the Basis for Resource
Orchestration, Business Resilience, and Family Livelihood in
Turbulent, Resource-Scarce Contexts**

A study of non-farm entrepreneurs in Ethiopia

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A study of non-farm entrepreneurs in Ethiopia

Muhammedamin Hussen Saad

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Dedicated to my wife Juma and our daughters Hanan, and Kosen

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Table of Contents

Chapter 1	10
General Introduction.....	10
1.1 Introduction	10
1.2 Research objective and research questions	20
1.3 Context of the study	21
1.4 Methodology	25
1.5 Contributions to theory and practice	32
1.6 Outline of the thesis.....	35
Chapter 2	38
Conceptualization of SMEs’ Business resilience: A Systematic Literature Review.....	38
2.1 Introduction	39
2.2 Methods.....	40
2.3 Results	42
2.4 Discussion and conclusions.....	63
Chapter 3	71
Robust Business Resilience Measurement of SMEs in Turbulent, Resource-Scarce Business Environments	71
3.1 Introduction	72
3.2 Theory	74
3.3 Methods.....	79
3.4 Results	81
3.5. Discussion and conclusions.....	88
Chapter 4	92
Entrepreneurial Orientation (EO) and Resource Acquisition: Using Social Capital in Turbulent, Resource- Scarce Business Environments.....	92
4.1 Introduction	93
4.2 Theory	95
4.3 Methods.....	105
4.4 Results	109
4.5. Discussion and Conclusions.....	116
Chapter 5	122

Resource Bundling and Leveraging: The Role of Entrepreneurial Orientation and Gender on Business Resilience in Turbulent, Resource-Scarce Business Environments 122

 5.1 Introduction 123

 5.2 Theory 125

 5.3 Methods 137

 5.4 Results 139

 5.5 Discussion and conclusions 148

Chapter 6 154

Business Resilience and Family Livelihood: Supportive Survival Strategies 154

 6.1. Introduction 155

 6.2 Theory 157

 6.3 Methods 161

 6.4. Results 165

 6.5. Discussion and conclusions 170

Chapter 7 173

General Discussion, Conclusions, and Implications 173

 7.1 Introduction 173

 7.2 Answers to the research questions 174

 7.3 Overall conclusions 181

 7.4 Contributions to the body of knowledge 185

 7.5 Limitations and recommendations for future research 190

 7.6 Research Implications 192

Summary 197

References 202

Appendices 222

About the author 236

Chapter 1

General Introduction

1.1 Introduction

The role of entrepreneurs and entrepreneurship in poverty reduction (Naudé 2010) is crucial in developing countries (DCs). The term ‘business environment’ includes a wide range of business turbulence-related challenges, such as the conflicts, terrorism, political instability, limited information flows, inadequate infrastructure facilities, lack of institutional support, institutional voids, and macroeconomic uncertainties commonly observed in DCs (Littlewood and Holt 2018). The continuous threat of disruption, turbulence, and vulnerability in DCs confronts small and medium enterprises (SMEs) with a resource-scarce environment and resource-demanding business challenges. Hence, SME entrepreneurs in DCs seem to be caught in a dialectal situation: they are confronted with barriers to developing the basic agency elements of entrepreneurship (i.e., ‘a praxis of knowing and doing of anticipating and acting’, (Fuller 2000) and must cope with these barriers as an entrepreneur due to poverty and the need to contribute to their family’s livelihood (Amorós and Cristi 2010). This situation leads to understanding entrepreneurs’ motivation to start a business; however, it also presents a theoretical bias against successfully developing and maintaining business resilience and contributing to family livelihood. Observed reality is inconsistent with this bias, and thus, research is needed to more fully understand how entrepreneurial activities help solve issues of poverty by relating resources to firm performance (i.e., resilience) and familial and societal outcomes (Bruton et al. 2013). Therefore, from an entrepreneurial perspective, reducing poverty requires not only maintaining firm resilience as an end goal but also ensuring firms’ entrepreneurial activities contribute to the family livelihood and societal improvement (Hitt et al. 2011).

The solution to this entrepreneurial challenge is suggested to lie in understanding strategies helping entrepreneurs perform in turbulent, disruptive, resource-scarce, and poverty conditions to create resilient businesses that better contribute to family livelihood (Bruton et al. 2013). Following the agency perspective on reducing poverty, this research will gain insight into entrepreneurial activities that create business resilience and transform this resilience into a contribution to family livelihood. The approach to the entrepreneurial construction of business resilience is theoretically

derived from the above-mentioned agency situation. The chosen theoretical approach, resource orchestration theory (ROT), scrutinizes the role of entrepreneurs who need to deploy constrained resource management (Sirmon et al. 2007, Sirmon et al. 2011). ROT explicitly considers the role of the entrepreneur/manager in driving sequential processes: structuring a firm's resources, bundling them into capabilities, and, eventually, leveraging these capabilities into value¹ (Sirmon et al. 2007). Firm resilience, according to ROT, involves not only acquiring the needed resources but also knowing how to coordinate, bundle, and leverage them to generate sustainable returns (Hughes et al. 2015). Positioning entrepreneurs, via ROT, as agents in the research limelight will enable us to gain a more thorough understanding of how entrepreneurs manage and use scarce resources (see Stoyanov et al. 2016). By employing ROT, the 'black box' of resource management, a critique on ROT's predecessor, the resource-based view (RBV), is evoked (e.g. Miao et al. 2017, Sirmon et al. 2007, Sirmon et al. 2011). RBV proponents have posited that the mere possession of resources is vital to the explanation of between-firm performance differences. A substantial body of RBV-based research has been conducted over the past few decades, and the findings have been mixed, which indicates there is an overlooked link between resources and firm performance (Sirmon et al. 2007).

To explain the relationship between resources and firm performance, the concept of entrepreneurial orientation (EO) was introduced. Through EO, we aim to understand what drives the acquisition and use of resources. A growing number of scholars (see Miao et al. 2017, Huang and Wang 2013, Hughes et al. 2015, Covin and Slevin 1989) state that a firm's EO, because it is a strategic initiative in contemporary entrepreneurship, is instrumental in realizing ROT processes. EO captures how entrepreneurs' managerial practices, methods, actions, and decision-making styles affect resource mobilization and use (Chirico et al. 2011). As a result, scholars have shifted their attention to the role of EO in effectuating ROT processes (Huang and Wang 2013, Hughes et al. 2015). By combining ROT with EO, we aim to touch upon the crucial, overarching question in the entrepreneurship literature: "What causes between-firm performance differences?" (Annarelli and Nonino 2016, Ates and Bititci 2011). The theoretical and practical urgency of opening the 'black

¹ *The terms such as business success, value, competitive advantage, performance, and resilience, although they may have a different meaning in different contexts. In this thesis, however, we interchangeably used them. Thus, they have the same meaning in this thesis.*

box' by combining ROT and EO to explain firm resilience (see Tognazzo et al. 2016) has not been addressed by empirical research.

Concerning the contribution to family livelihood, one can posit that business resilience, achieved in a disruptive, resource-scarce environment, need not result in resilient contributions to family livelihood. Generating and maintaining a livelihood in such situations is complex and dynamic, and one constant may be the day-to-day uncertainty of survival (see Marschke and Berkes 2006). The approach to studying livelihood by focusing on the so-called survival strategies used by individuals, households, or groups to make a living and cope with uncertainty (Marschke and Berkes 2006) seems to fit the specific target group of this research (i.e., entrepreneurs). Particular attention is paid to entrepreneurial behaviors adopted to mitigate risk and cope with disruption and uncertainty, as well as their contribution to family livelihood (see Scoones 1998). This approach to the study of family livelihood is, therefore, actor-oriented and contingent (Kirby and Ibrahim 2011, Cader and Norman 2006).

By combining the entrepreneurial efforts to achieve business resilience and family livelihood, this research aims to understand how entrepreneurs, through their practices and actions, ultimately contribute to reducing poverty. Entrepreneurs, as agents, shape their actions in such a manner that they manage their chain of business activities to reduce poverty (i.e., from acquiring resources to deploying supportive survival strategies to strengthen the transformation of business resilience into contributions to family livelihood). Theoretically, we extend ROT by showing how entrepreneurs, represented by EO, acquire resources and use them effectively to achieve business resilience. On the entrepreneurial path to poverty reduction, we also will highlight how survival strategies deployed by entrepreneurs support the transformation from business resilience into a family livelihood. Research using an entrepreneurial perspective to link firms' resilience to family livelihood in impoverished settings is largely missing from the entrepreneurship literature, especially the SME literature (Mozumdar 2018).

The role of SMEs in poverty reduction

Entrepreneurs acting within SMEs are central to this study. The organizational context of SMEs also adds to the challenge of entrepreneurs in DCs. High levels of vulnerability and resource scarcity are more characteristic of SMEs than large companies. In line with the underlying assumptions of ROT, we argue that SMEs' resilience is determined not by the possession of

sufficient resources but how well resource utilization is orchestrated. This is an essential issue for building resilient SMEs, especially those operating in DCs, which challenge their resilience on a daily basis. SMEs in such settings have been defined as the backbone and engine of the economy (Page and Söderbom 2015). Hitherto, empirical evidence on how these companies achieve varying degrees of resilience and manage to contribute to family livelihood is increasingly more noteworthy. Ultimately, research investigating how entrepreneurs in such a setting can create resilient SMEs and sustain their family's livelihood could be a valuable approach to reducing poverty and improving living conditions.

The business environment in DCs makes SMEs more vulnerable to failure (Bullough et al. 2014). SMEs in such a setting face numerous, varied, and extreme forms of disruption from the business environment (see Section 1.1). Moreover, SMEs in developing countries operate under resource-constrained circumstances (Linna 2013, Mozumdar 2018). In such business environments, SME failure rates are high (Page and Söderbom 2015, Ayyagari et al. 2011). In parallel, poverty also remains a critical issue for millions of people in such a setting (Bruton et al. 2013). The solution lies in understanding how to support the creation of more resilient and family livelihood-supportive companies under such circumstances (Hitt et al. 2011, Linna 2013, Bruton et al. 2013). SMEs' survival and growth seem to depend on entrepreneurial actions and decisions to enhance their capability to recognize business opportunities, adjust, and adapt their activities.

Making good entrepreneurial decisions and taking effective action are needed as SMEs, mainly non-farm enterprises, play a crucial role in job creation and economic growth in developing countries (Nagler and Naudé 2017). An indication of their socioeconomic importance globally, especially in DCs, can be found in their contribution to a country's gross domestic product (GDP) and their ability to provide employment opportunities. For example, according to Dalberg (2011), "SMEs account for 16% of GDP in low-income countries and 51% in high-income countries and provide 78% of the employment in low-income countries, versus 66% in high-income countries, PP: 8". In most developing countries, in addition to playing an economic role, SMEs are considered a vital policy instrument that links the farming and non-farming sectors of the economy by providing innovative inputs and equipment, as well as the means for supplying farming outputs to markets (Nagler and Naudé 2017). This linkage enhances inclusive economic development (Tambunan 2008) and supports national economic growth and job creation strategies. The share of

entrepreneurship in a country's GDP, which is primarily produced by SMEs in such a context (Ghani and O'Connell 2014), in comparison to farming (e.g., agricultural activities, such as crop production) is highlighted by the statistics shown in Figure 1.1. The figure includes the manufacturing and service sectors' relative contributions to GDP growth compared to the agricultural sector.



Figure 1.1: SMEs' manufacturing and service sector contributions to GDP growth rates in 1990–2011².

To emphasize the importance of SMEs to employment growth in developing countries, Figure 1.2 presents how SMEs from 99 developing countries have contributed to job creation (Ayyagari et al. 2011, Page and Söderbom 2015). These facts demonstrate that SMEs are a driving force for economic and social stability due to their quantitative impact on the national economy and their practical effect of creating jobs. Thus, they can serve as a driving force behind a resilient national economy in developing countries. They may also act as an engine in facilitating a competitive business environment and rural industrialization, as well as transform the economy from agriculture to industry (Shinozaki 2012).

² The calculation is based on World Development Indicators. Ethiopia's figures are taken from national accounts. "Growth rate" calculated as compound annual growth rate based on constant GDP at Purchasing Power Parity (PPP) (see Ghani and O'Connell 2014).

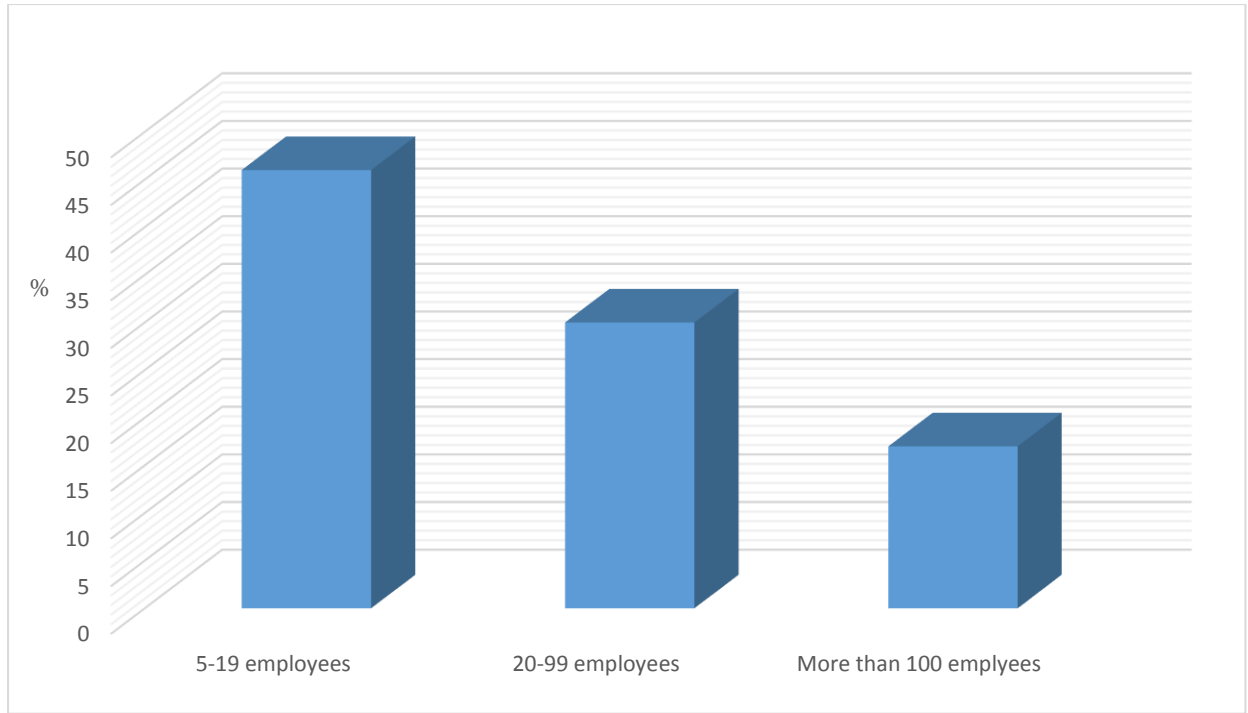


Figure 1.2: SMEs’ contribution to job creation across 99 developing economies by firm size, surveyed in the period 2006-2010³.

SMEs may also play a role in supporting inclusive economic development in developing countries (Rijkers and Costa 2012). Women’s participation in entrepreneurial activities in Ethiopia, compared to other Sub-Saharan African countries (World Bank, 2016), is presented in Figure 1.3. A larger percentage of females own and work in Ethiopia’s SME manufacturing sector than in other Sub-Saharan African countries.

³ World Bank Development Research Group (see Ayyagari et al., 2011).

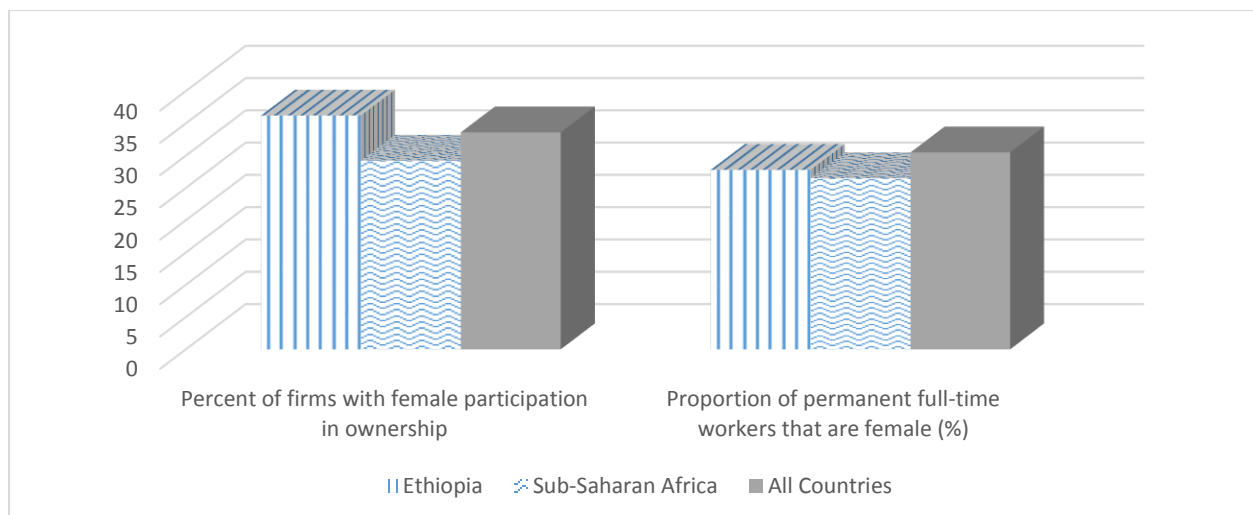


Figure 1.3: Female participation in Ethiopian and Sub-Saharan African SMEs 2015–2016⁴.

The above evidence illustrates that SMEs in developing countries have a significant impact in terms of job creation and inclusive economic development (Page and Söderbom 2015), although many have been hit by the extreme, persistent, and diverse range of challenges characterizing the setting. Nagler and Naudé (2017), in their study of six Sub-Saharan African countries, show that SMEs are ubiquitous in this context.

Follow the resources

While a rising number of SMEs are being established, their failure rates are also high in Sub-Saharan African countries (Ayyagari et al. 2011, Page and Söderbom 2015). To establish resilient SMEs facing a persistently vulnerable, turbulent, and resource-scarce context, we argue, along with Sirmon et al. (2011), the possession of resources is at least as important as how these resources are managed (see as well Hansen et al. 2004). Resources are “something a firm possesses or has access to, not what a firm is able to do, PP: 460 ” (Gröbler and Grübner 2006). How the resources are collected and used for value creation, which is captured by the resource orchestration framework, explicitly addresses process-oriented resource management to gain a competitive advantage (Sirmon et al. 2011), or more generally, a firm’s performance.

⁴ Enterprise Surveys data collected by World Bank from June 2015 to February 2016: <http://www.enterprisesurveys.org>. Here the data refer to the manufacturing oriented SMEs sector alone.

In RBV, the presence and generic characteristics of rent-generating resources (i.e., value, rarity, inimitability, and non-substitutability) function as explanatory variables for competitive advantage (see Barney 1991, Crook et al. 2008). However, Barney himself, in Barney and Arikan (2001: PP, 174), states that “resource-based theory has a straightforward view about how resources are connected to the strategies that a firm pursues.” The criticisms revolve around the positioning of the resources because RBV fails to provide a sound conceptual basis for resource identification and usage, which leads to the inconclusiveness of empirical investigations into building RBV (Sanchez 2008). For example, Nothnagel (2008) reports a positive, significant relationship exists between resources and firm performance, while other research shows an insignificant or negative relationship (see Nothnagel 2008: pp 143-71). Additionally, the explanatory power of unique internal resources in firm performance is relatively insignificant (Nothnagel 2008). Armstrong and Shimizu (2007) similarly report a low proportion of the variance is explained by firm resources (0.08 on average). These results suggest variables are missing that explain the resource-performance relationship (Armstrong and Shimizu 2007, Miao et al. 2017, Sirmon et al. 2007).

Resource orchestration builds on RBV’s ‘simple view’ by incorporating strategic management and implementation issues (see Sirmon et al. 2011) in its logic to link resources to a firm’s resilience. As such, resource orchestration theory (ROT) is a nascent offshoot of the resource-based view (RBV). ROT includes management actions regarding structuring the portfolio of resources (i.e., acquiring, accumulating, and divesting), bundling resources to build capabilities (i.e., stabilizing, enriching, and pioneering), and leveraging capabilities in the market place (i.e., mobilizing, coordinating, and deploying) to create value (Sirmon et al. 2007, Sirmon et al. 2011), which increases a firm’s resilience. Sirmon et al. (2008) suggest that the synchronization of resource-related management actions is important in creating value.

Bundling and leveraging actions collectively emphasize the use of resources. Leveraging focuses on exploiting a firm’s capabilities by building on structuring and bundling, which should lead to seizing market opportunities via an entrepreneurial strategy (Sirmon et al. 2011). More specifically, the bundling action centers on entrepreneurial actions to mobilize acquired resources into capabilities, and leveraging involves activities that coordinate and deploy the capabilities to achieve a competitive advantage (Tavassoli et al. 2017). Relating managers’ actions specifically to the firm’s resources potentially extends the understanding of resource-related firm performance in

terms of resilience in comparison to the resource-based view (Sirmon et al. 2011). In practice, bundling and leveraging processes are acted on concurrently (Sirmon et al. 2007). Tavassoli et al. (2017) note that these two processes are difficult to differentiate because they both include forming more complex resources combinations to create valuable, rare, and difficult to imitate capabilities, as well as an increased ability to act on opportunities. Moreover, the entrepreneur's ability to bundle and leverage resources might be understood as a dynamic capability in this sense, and it could be better to combine and deploy them to achieve better firm outcomes (Miao et al. 2017). Thus, we combined these two resource orchestration processes in this research (see Chapter 5).

Entrepreneurial orientation as a driver for resource orchestration processes

This research will direct its attention to underlying resource-related management actions: gathering, bundling, and deploying resources and their role in a firm's performance. We suggest considering entrepreneurial orientation (EO) as the driver of these management actions. Research on EO has developed over the past three decades, beginning with Miller (1983) work in the early 1980s, which was primarily empirically-driven (Wales 2016, Wiklund and Shepherd 2005). EO shapes entrepreneurs' efforts to exploit opportunities (Akgün and Keskin 2014). The perception of opportunities should drive actions taken by entrepreneurs and focus on the exploitation of these opportunities (Akgün and Keskin 2014). EO is defined, here, as the strategic capabilities, managerial philosophy, decision-making styles, practices, and attitudes of entrepreneurs that lead to entrepreneurial actions and decisions (Lumpkin and Dess 1996). Because entrepreneurs may take strategic actions in response to their internal and external environment that change and transform their existing strategic direction (Sirmon et al. 2008, Barney and Arikan 2001), strategic entrepreneurial or managerial actions regarding resource accumulation and utilization are crucial in filling the missing link between resources and resilience.

Although the strategic managerial action of bundling resources, in itself, seems enough to achieve a competitive advantage (see Brandon-Jones et al. 2014), EO shapes the manner in which opportunities are exploited by infusing entrepreneurial actions (Wales et al. 2013) with innovativeness, risk-taking, and pro-activeness (i.e., the three main dimensions of EO (Miller 1983)). The manner in which EO shapes entrepreneurial actions has contingencies. According to contingency theory, internal and external conditions influence how an organization is managed

(Grötsch et al. 2013). Several studies (Wales et al. 2013, Mar Fuentes-Fuentes et al. 2015, Lumpkin and Dess 2001, Rauch et al. 2009, Wiklund and Shepherd 2003) suggest that business performance (e.g., the resilience implications of EO) is context-specific. A context constrained by the social and business environment can inevitably shape the managerial assumptions and decision-making processes of entrepreneurs, including the decision to pursue entrepreneurial opportunities and how customer value is created and delivered (Boso et al. 2013).

The implication of considering EO a driver of resource orchestration and accounting for contingencies in EO is that resource orchestration also becomes context-sensitive. Context sensitivity, in relation to contingency theory, suggests that organizations adapt depending on the environmental conditions in which they exist (Donaldson 2001). Specifically, in this research, we expect that companies' resource orchestration will adapt to them in the resource-critical circumstances in which these companies operate. Scarce resources and continuous threats of disruption from the environment characterize these critical resource circumstances, like those encountered in DCs. Resource orchestration theory also extends its predecessor, RBV. This latter theory is criticized for its context insensitivity, which means RBV is unable to identify the conditions in which resources or capabilities may be most valuable (Ling-Yee 2007).

The construction of family livelihood: Survival strategies

As Sin et al. (2005) note, an important message from the findings in the entrepreneurship literature is that simply investigating the direct effect of firm performance on livelihood does not provide a complete picture. To unravel the strategies through which firm resilience improves family livelihood, many different moderating variables have to be considered (Rauch et al. 2009). Central to this study are so-called survival strategies adopted by entrepreneurs, in addition to their quest for resilient business performance, to mitigate threats of disruption to their family's livelihood. This entrepreneurial agency orientation is also linked to a contingency approach. Contingency was introduced in previous research by positing that strategic actions and decisions taken by entrepreneurs differ in developing economies from those in the developed world, and hence, it is reasonable to expect that these actions and decisions will differ even more significantly in settings that include a high rate of poverty (Bruton et al. 2013, Naudé 2010, Azmat and Samaratunge 2009). Thus, we expect that entrepreneurs will make strategic choices and act in ways that substantially differ in different environments (Bruton et al. 2010, Bruton 2010). Herein, we examine the

moderating support that survival strategies, such as the strategically selecting a sector in which to start a company, the business location, and sources of financing, provide and help entrepreneurs increase their business' resilience and sustain their family's livelihood. Research linking the value of firm performance (i.e., resilience) to family livelihood in poverty domains is largely missing from the entrepreneurship literature and, in particular, the SME literature (Mozumdar 2018).

1.2 Research objective and research questions

A main objective of this research is as follows:

Gain insight into how entrepreneurs in developing countries can mitigate poverty by building business resilience through entrepreneurial orientation as a driver for resource acquisition and usage, transforming business resilience into family livelihood by strategically positioning their business.

This thesis addresses the following central research question and sub-questions: How does entrepreneurial orientation (EO) drive subsequent resource orchestration toward business resilience, and is business resilience transformed into a contribution to family livelihood by entrepreneurs acting in turbulent, resource-scarce business environments? Resilience is a cutting-edge cross-concept in academic and policy circles in recent years. However, in the existing literature, no consensus has been established on the concept's definition or how it should be measured. Hence, the specific research sub-questions are as follows:

1. How can we define the resilience concept in relation to SMEs in turbulent, resource-scarce environments?
2. What dimensions are used to measure the resilience of these SMEs?
3. What is the role of EO and social capital in SMEs' resource acquisition to achieve resilience?
4. Does EO drive the use of resources to achieve SME resilience? Is there a gender difference in EO?
5. To what extent do entrepreneurial survival strategies influence the transformation of SMEs' resilience into a contribution to family livelihood?

In this research, the data are collected in Ethiopia from non-farm entrepreneurs.

1.3 Context of the study

Ethiopia is a developing country where small businesses are dominant in the economy (Nagler and Naudé 2017, Nagler and Naudé 2014) and has been reported as having the fastest growing economy in the region (see Konadu-Agyemang 2018). The focus is on non-farm enterprises, which are mostly small and medium enterprises (SMEs), in Ethiopia. The research focus is also on entrepreneurs as Ethiopian SMEs are characterized by strong links between the firms and the owner-managers (Darnall et al. 2008). While the literature on organization resilience and EO has been predominantly studied in the context of Western developed economies, relatively less research has been conducted in turbulent, resource-scarce business environments (Rauch et al. 2009). Linnenluecke (2017) and Martin and Javalgi (2016) comment that developing countries have received little attention from scholars in the field. This suggests further research is required to explore EO and resilience in the context of developing economies due to identified differences between patterns of entrepreneurial behavior and differences between disruptiveness and resource scarcity in developing and developed economies (Biggs 2011, Boso et al. 2013).

In Ethiopia, the structural transition from agricultural to industrialization is widely hailed as a panacea for poverty alleviation (Nagler and Naudé 2017). The development of non-farm entrepreneurship (Naudé 2010, Nagler and Naudé 2014) and, in particular, establishing resilient small business firms, have seemed a promising way to attain improved livelihood and economic growth. However, small firms in the region are less resilient and face multiple hurdles to sustaining their businesses.

Ethiopian economy at a glance

With about 105 million people (2017), Ethiopia is among the most populous countries in Sub-Saharan African countries and has abundant opportunities for small business development (McKenzie and Woodruff 2015). Ethiopia's location gives it strategic dominance as a jumping-off point on the Horn of Africa, close to the Middle East and its markets, and aims to reach lower-middle-income status by 2025. Ethiopia's average economic growth rate of 10.3% per year from 2006 to 2017 is considered a 'miracle' when compared to other Sub-Saharan African countries⁵.

⁵ *The World Bank in Ethiopia (2017), World Bank, from <http://www.worldbank.org/en/country/ethiopia/overview>.*

However, despite such continued economic growth, widespread unemployment and instability remain a significant challenge for the country. Ethiopia is still one of the poorest, with a per capita income of \$783, and unemployment and instability have become a major challenge for the country. For example, over the last three years, the country has been experiencing increasing unrest, mostly among the youth. The country has the largest youth population in the region. This labor force represents a fast-growing proportion of the population (Nagler and Naudé 2017). Available evidence indicates that about 25% of the nation's working-age population is currently young adults, and the unemployment figures are expected to increase alarmingly in the coming years (Dibie 2014, Nagler and Naudé 2017). These youth-related unemployment problems have become a serious social issue in Ethiopia (Bekele and Worku 2008b, Bezu et al. 2012). The concern is, therefore, whether there exist substantial job creation activities in the country to absorb the growing labor force entering the market. This growth momentum has to be continued to more effectively reduce poverty and rampant unemployment conditions in the country.

Ethiopia's main challenges are sustaining its positive economic growth and accelerating poverty reduction, which requires significant progress in creating resilient companies that provide a vital contribution to employment growth and improved livelihood. Farming (i.e., agricultural activities) is the largest sector of the Ethiopian economy, providing jobs for almost 85% of the country's population, contributing over 40% of the country's gross domestic product (GDP) and 60% of exports (Bezu et al. 2012, Parisi 2018). Although efforts have been made by the government to boost agricultural productivity with community shops, efforts to stabilize the volatility of food prices and subsidize fertilizers, farmers still struggle to abandon the subsistence farming system (Nagler and Naudé 2017). Small land-holders dominate crop agriculture, and with no further expansion of crop cultivation, production growth will need to come from yield improvements resulting from improved seeds and fertilizer (Parisi 2018).

However, the non-farm sector has gained importance in Ethiopia over the past few years. An average range of 10–35% of rural households in Ethiopia are engaged in non-farm enterprises, indicating that Ethiopia is making an effort to move its economy away from a dependence on agriculture (Page and Söderbom 2015, Nagler and Naudé 2017). To this end, developing the non-farm entrepreneurship sector is a vital alternative instrument to address the multifaceted problems related to unemployment and, thus, reduce the rate of abject poverty (Bezu et al. 2012, Nagler and

Naudé 2017). However, turbulence and the resource-constrained circumstances of the environment prevent the non-farm sector from developing more jobs and creating resilient businesses that improve peoples' lives.

Nonfarm entrepreneurship in Ethiopia

Fostering non-farm entrepreneurship⁶ (NFE), in particular, has been set as a policy instrument for household livelihood improvement in Ethiopia. According to Asfaw et al. (2017), engagement in non-farm entrepreneurial activities, besides its contribution to enhancing the agricultural transformation, will help absorb surplus labor from rural areas, enabling the reduction of income uncertainty and increasing farm productivity, and could also be among the likely sources of employment in Ethiopia. NFE activities contribute 35–50% of rural household income in Sub-Saharan Africa (Haggblade et al. 2010), and this contribution has risen in many countries, including Ethiopia (Ali and Peerlings 2012, Nagler and Naudé 2017, Page and Söderbom 2015). These figures illustrate the enormous potential this sector has for reducing rising unemployment problems.

The NFE sector has been made an integral part of the development agenda in recent years, especially in Sub-Saharan African countries, such as Ethiopia (Nagler and Naudé 2017, Nagler and Naudé 2014, Haggblade et al. 1989). Although there has been an increase in the number of publications dealing with NFEs' role in poverty alleviation and development (Nagler and Naudé 2014, Nagler and Naudé 2017), several related issues are still not well researched. Notably, studies investigating the resilience of NFEs are almost absent in the literature. The promotion of vibrant, resilient non-farm enterprises could be a pivotal strategy due to their multidimensional economic and social significance in addressing issues related to unemployment and poverty in Ethiopia (Ali and Peerlings 2012, Bekele and Muchie 2009). Research findings indicate that challenges experienced by the agricultural sector can be alleviated by promoting non-agribusiness enterprises

⁶*There are entrepreneurial activities in farming, such as crop production. In this thesis, however, the focus is not on farming-as-entrepreneur, but on self-employment/entrepreneurship activities of individuals in semi-urban and rural areas. In the rural non-farm economy, we understand there is a residual sector wherein all non-farm activities in rural areas are captured, including agribusiness, services, trade and retail, tourism, rural industrialization, construction, and mining (Naudé and Nagler, 2014. Although described as non-farm, many of these activities are linked to agriculture and can take place on a farm (e.g., food processing and veterinary services; Rijkers and Costa, 2012).*

with suitable macroeconomic policy tools and adequate financial and policy support from the national government (Haggblade et al. 1989, Haggblade et al. 2010, Nagler and Naudé 2017).

A considerable number of researchers suggest that agricultural (i.e., farming) sector development policies and strategies in developing countries like Ethiopia must be aligned with SMEs to harness more of the overall economy (Bachewe et al. 2016, Haggblade et al. 2010, Bezu et al. 2012). Although the government has established a national development strategy for the promotion of entrepreneurship in general and specifically for SMEs (Bachewe et al. 2016, Bekele and Muchie 2009, Bezu et al. 2012), thus far, success has been limited. Essential services required by SMEs are often unavailable or delivered in a limited capacity or incompetently (Bekele and Muchie 2009). For instance, SMEs struggle to gain access to financing options with favorable terms despite the recent increase in the number of banks and microfinancers in the country (Bezu et al. 2012). Furthermore, the economic significance of the SME sector is often debated among policymakers. Some argue that although SMEs can expand very rapidly, most of them are vulnerable to failure due to extremely disruptive conditions related to basic infrastructure, unfavorable macroeconomic policy, and poor access to appropriate technology (Bekele and Muchie 2009, Biggs 2011).

There is a large body of research on the Ethiopian agricultural sector. However, few studies have attempted to analyze the strategic importance of SMEs, especially their resilience and role in livelihood improvement (Ali and Peerlings 2012, Bekele and Muchie 2009). We argue, in this paper, that the development of SMEs in Ethiopia, especially non-farm enterprises, is critical to the development of the country's economy.

Policy support for non-farm entrepreneurship in Ethiopia

It has been reported that complicated business policies and regulations in low-income countries like Ethiopia are significant hurdles for the performance of SMEs (Bank 2005). In these countries, struggling SMEs have one or two options: comply with regulations or operate in the informal sector (Tambunan 2005). However, neither of the two options is strategically beneficial for small businesses development as the options fail to meet the basic needs and requirements of small firms. Because SMEs in Ethiopia are over-regulated and under-resourced, compliance with existing regulations does not provide SMEs with competitive market conditions that are essential for profit-making and fundraising. The second option of operating in the informal sector denies SMEs access to certain benefits, such as loans from formal money-lending institutions, including commercial

banks, and business-related training, technical assistance, and assistance with workplace-related problems (Tambunan 2005). Lowrey (2004) states that in countries with good macroeconomic policies, SMEs flourish and reach their full potential; however, in countries where macroeconomic policies are not favorable, SMEs struggle to survive and fail to play a prominent role in the national economy (Tambunan 2005).

The development of entrepreneurship in Ethiopia has been faced with many challenges, such as underdeveloped technical skills, inadequate funding, scarce incentives, ill-equipped vocational and technical training institutions, poor managerial skills, and the lack of a progressive educational system (Page and Söderbom 2015). Many of the unemployed youths in the country are creative, but they are unable to start a business that could make them self-reliant due to cultural and social norms; they also do not have enough funds and cannot get loans due to their lack of experience or collateral (Dibie 2014). Entrepreneurship can play a significant role in reducing youth unemployment by increasing their employability. Some government interventions are mentioned in the next chapter, including promoting entrepreneurship by providing grants as seed money and acting as a guarantor to facilitate loans by microfinance institutions (MFIs). A culture of supporting entrepreneurship should also be created in the private sector. Businesses could provide young people with financial and technical assistance to help them become entrepreneurs by facilitating, for example, skill transfer, experience-sharing, market opportunities, and mentoring services.

1.4 Methodology

Research design

This thesis adopts a systematic literature review and quantitative approaches to answer the research questions. The systematic literature review (Chapter two) is performed to organize SME resilience-oriented publications because the existing research on the topic is fragmented (Williams and Vorley 2014, Linnenluecke 2017), and the concept of resilience in SMEs lacks a unified definition in the literature (Kamalahmadi and Parast 2016). The lack of a widely agreed-upon meaning blocks the advancement of quantitative research on the topic. Using the systematic review technique on the existing literature provides a more thorough understanding of the concept and insight regarding the gaps that exist and need to be addressed.

The following chapters (i.e., 3-6) describe the deployment of the data collection method, which is a survey containing open-ended and closed questions, to empirically test hypotheses and answer the research questions. Chapter 3 discusses the development of a robust SME resilience assessment instrument and the confirmatory factor analysis approach used to validate its robustness. The justification for this chapter is that most of the existing SME resilience- related literature is conceptual and the few empirical studies available are limited to case studies. Thus, in this study, based on the survey data, we develop a robust instrument for future SME resilience- related studies. We also check for gender variance in the scale because male and female entrepreneurs in developing countries do not have the same level of access to social networking resources. This is to address the call for promoting female entrepreneurship in developing countries because SMEs employ a significant percentage of females. Chapters 4 and 5 describe how the analysis and hypothesis testing is achieved via partial least square-structural equation modeling (SEM), while Chapter 6 describes the use of a hierarchical regression analysis to investigate the linkage between firm resilience and family livelihood, as well as survival strategies that strengthen this linkage in the context of this study.

Study settings

This study was conducted in two provinces (i.e., Arsi and East Shewa) of Oromia, a regional state in Ethiopia (the location of these provinces is shown in Figure 1.4). Ethiopia, especially the Oromia regional state, faced a significant wave of protests, mainly by youth, over a four-year period from 2013 to 2017. These provinces were chosen due to their interesting (i) economic and (ii) geographical features and because they are (iii) the center of major political turmoil that has shaken the country in recent years. While we were conducting the fieldwork (January–September 2016), there was massive turbulence and riots in the country, and it was very difficult to cope with these selected provinces. Additionally, by collecting data from two areas, our study was able to reach an adequate sample size across a broad spectrum of sectors and gain better insights into SMEs in Ethiopia. These provinces have better access to microfinance institutions, Oromia Credit and Savings Share Company (OCSSCo) and Wasasa microfinance, the two largest microfinance institutions (MFIs) operating in these provinces. We considered the two regions to capture variation. East Shewa is characterized by a higher concentration of SMEs compared to Arsi province. Another variation, while the East Shewa have better access to infrastructures and also is located in the economic center of Ethiopia as it is nearby to Addis Ababa, the country's capital

city; the Arsi province has poor infrastructures access and low concentration of business enterprises. The MFIs, which have branch offices in both provinces, cooperated by providing a list of SMEs operating in Assela, Adama, Bishoftu, Mekii, and Batu. Thus, data used for the different analyses are derived from the same sample of small firms located in Arsi and East Shewa, two provinces in Ethiopia.

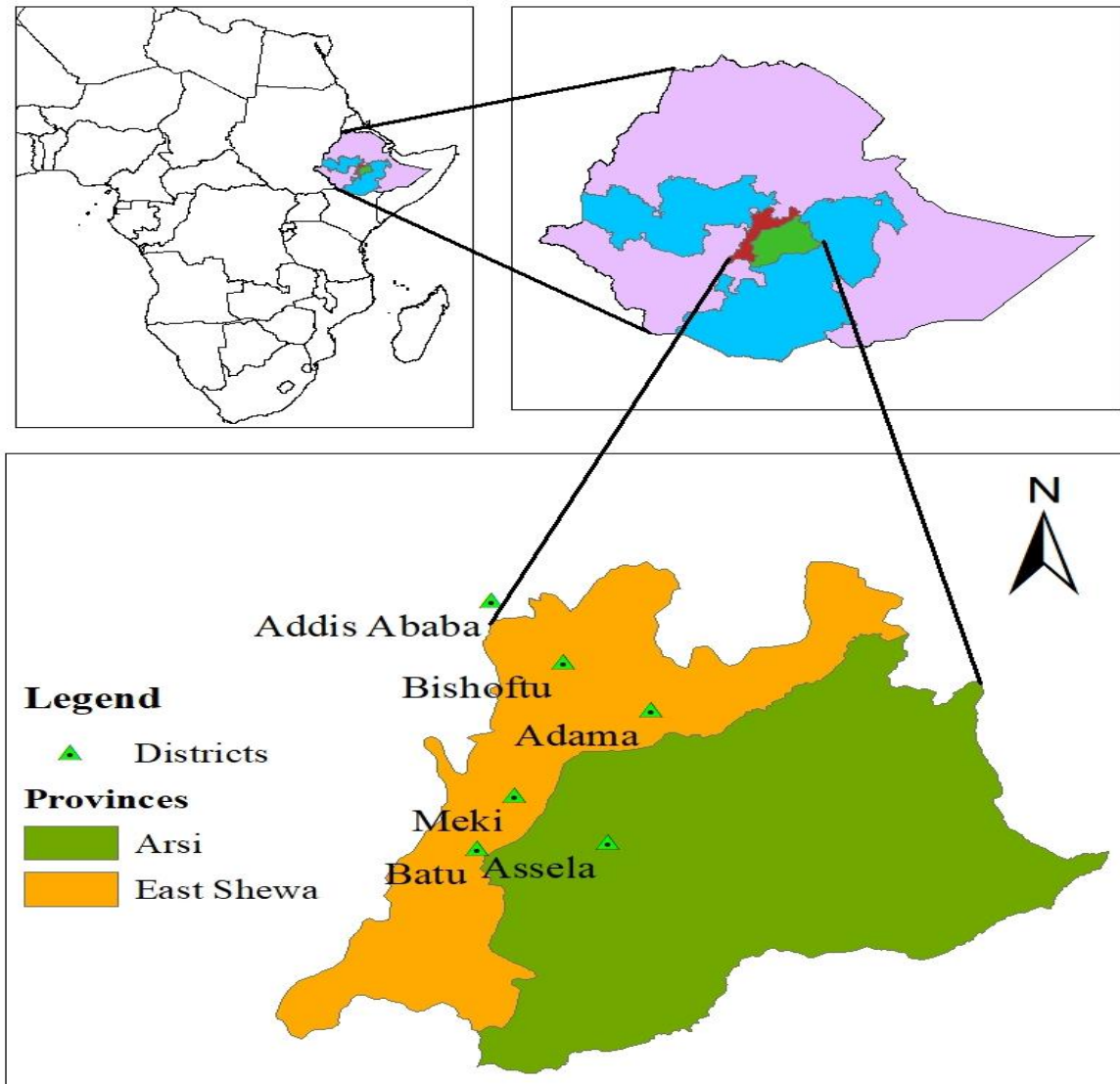


Figure 1.4: A map of Ethiopia with the two target provinces.

Data collection procedures

Before embarking on the data collection process, we visited organizations working on microenterprise development, as well as regional MFI officers. The purpose of the visits was to create awareness and obtain adequate support from officers who have direct contact with

entrepreneurs. Before launching the full survey, we pre-tested the questionnaire using five faculty members and four industry experts affiliated with SME-supporting institutions to generate feedback (see Table 3.2 in the Appendices under the ‘Chapter 3’ heading). These experts helped us assess the content and meaning of each item/statement in detail. Hence, their feedback helped ensure the face validity of the items, which were adopted from the existing literature as recommended by Nam et al. (2016) and Yilmaz-Börekçi et al. (2015). The experts’ feedback from the pre-test was then used to improve the survey. Next, we conducted pilot interviews with selected SME owner-entrepreneurs using the draft questionnaire. While the pilot study was being conducted (March 1–20, 2016), political turmoil was disrupting the SMEs’ functioning, especially in the region of interest. Based on the feedback received from experts and the pilot interviews, we finalized the questionnaire for the survey. The questionnaires were administered in face-to-face meetings with non-farm entrepreneurs.

Sample

A list of entrepreneurs was generated from OCSSCo and Wasasa micro banks that are operating in the above-mentioned provinces. While the OCSSCo is subsidized by the government and the Wasasa is the private micro banks, operating in the regions. We chose to consider these banks since they cover wide parts of the country and also are leading microfinance in Ethiopia based on borrower numbers from government-subsidized and private banks. They also target the rural and semi-urban areas of the country where a majority of the population of the country is living. We used a list of entrepreneurs related to the two banks operating in two regions (Arsi and East Shewa provinces) to increase observed variance and to capture the regional variation. These organizations provided us 1933 SMEs’ (entrepreneurs’) names. We adopted a systematic random sampling approach to choose a representative sample for the study. Systematic sampling is a probability sampling technique where the initial sampling point is selected at random and then the cases are selected at regular interval. To calculate the interval, we divided the total population size (entrepreneurs) by the desired sample size. After eliminating overlapping names, finally 408 SMEs were selected as respondents for the survey. Data collection was performed during face-to-face interviews, primarily in the respondents’ place of business. The data, consisting of a large number of socioeconomic and demographic variables from each of the 408 entrepreneurs, were gathered

between January and September 2016. Table 1.1 gives an overview of the sample respondents by regions and micro banks.

The average size of the participating firms was about 4 employees. Among the sampled firms, 50 percent had below 3 employees, 48 percent had 3-100 employees, and 2 percent had above 100 employees. Whether the firm is characterized as “small”, “medium” or “large” is not straightforward and depends on the industry in which it competes. However, it is reasonable to argue that in an Ethiopian context, some of the firms in the sample, particularly those that exceed 100 employees, are considered large firms. The weight of the sample skews toward SMEs, as this category constitutes 98 percent of the total sample.

A total of 50 percent of respondents are in the category of firm age less than 4 years, 43 percent of respondents are in the category of firm-age less than 10 years old and newer, and only 7 percent of respondents were between 10 and 35 years old. These variable results indicate the majority of SMEs in the study are younger (as 93 percent responded less than 10 years old).

Table 1.1 Overview of sample respondents by regions and micro banks

		Provinces		Total
		Arsi	Eastshewa	
Microfiance institutions	OCSSCo	66	203	269
	Wasasa	56	83	139
Total		122	286	408

Characteristics of the study population

Our survey incorporated a wide range of sectors to elicit varied viewpoints regarding SMEs’ resilience in DCs, such as Ethiopia. Table 1.2 presents the distribution of SMEs based on the types of activities they engaged in, the gender of the entrepreneurs, and the age range of the firms. The results show that 147 (36%) of them were operating in trade, 80 (19.6%) in agribusiness, 60 (14.7%) in manufacturing, 58 (14.2%) in consumer-related services, 24 (5.9%) in transportation, 22 (5.4%) in construction, and 17 (4.2%) in other activities. There was a roughly equal distribution of male (50.7%) and female (49.3%) entrepreneurs in our sample. Regarding the duration (age) of the enterprises, the results show the SMEs’ have a varied range of 1–32 years

Table 1.2: Characteristics of the study sample by sectors, gender and firm age (range)

SMEs sector/business types	Number of SMEs per sector	Gender of the entrepreneurs		Age Range of the of firms
		Female	Male	
Consumer-related activities (e.g., restaurants)	58	43	15	1–14 years
Agribusiness-oriented (e.g., dairy and poultry)	80	41	39	1–17 years
Manufacturing activities (e.g., metal work)	60	12	48	1–17 years
Construction sector	22	6	16	1–5 years
Trade of various commodities	147	82	65	1–32 years
Business services (e.g., transportation)	24	9	15	1–5 years
Others	17	8	9	1–5 years

Table 1.3 illustrates the mean scores of core variables collected for analysis across the business sectors type. Accordingly, the construction sector SMEs absolute investment amount was reported highest compared to other sectors. Those SMEs who engage in business service activities appear to generate better income from other sources. SMEs who engage in trade seems to have better business ties and in terms of profit reported, and the construction sector SMEs seem doing well in this study settings. This may be connected to structural investment focus made by the government (especially related to road and housing construction over the last decade). This may encouraged SMEs taking part in the construction sector. Detailed information on other firm performance indicators is also displayed in Appendix H, see table i).

Table 1.3 the mean scores and standard deviation of variables by SMEs sector type

Sector or business types	Number of SMEs per sector	Investment amount ⁷	Income from other sources	Social ties ⁸	Business ties	Business resilience	Profit reported by SMEs/ in 2016)
Consumer-related activities (e.g., restaurants)	58	135.3 (189.0)	26.4 (14.7)	4.8 (1.3)	5.4 (1.3)	5.4 1.1	66.7 (68.8)
Agribusiness-oriented (e.g., dairy and poultry)	80	135.4 (180.7)	40.8 (51.4)	4.0 (1.6)	4.6 (1.8)	4.7 (1.3)	34.0 (66.7)
Manufacturing activities (e.g., metal work)	60	262.4 (362.4)	22.6 (18.5)	4.8 (1.6)	5.8 (1.2)	5.5 (1.2)	89.3 (170.4)
Construction sector	22	284.7 (10847.8)	26.9 (22.8)	4.6 (1.4)	5.6 (1.4)	5.4 (1.2)	522.3 (1156.0)
Trade of various commodities	147	179.3 (349.2)	24.4 (20.3)	4.6 (1.5)	5.9 (1.3)	5.3 (1.0)	65.9 (99.5)
Business services (e.g., transportation)	24	186.8 (218.1)	85.1 (156.2)	4.5 1.6	4.8 1.6	5.2 1.1	43.5 (42.6)
Others	17	216.6 (315.6)	17.7 (12.7)	4.9 (1.5)	5.6 (1.3)	5.6 (0.80)	77.5 (52.7)

In bracket_SD

Table 1.4 provides an overview of the respondents educational status and age (mean) characteristics by gender (absolute numbers and percentage in brackets). The entrepreneur's age is a demographic variable that might cause variation in resource acquisition and usage and, hence, business resilience through its effect on growth ambition, business determination, and experience. As shown in Table 1.4, the age distribution by gender shows that women have almost the same mean age as men. The same Table shows that about 6.1% of the respondents had not received any formal education and are illiterate. About 11.8% of the respondents' highest level of education attended was primary school (i.e., Grades 1–6), while 10% had attended Grades 7–8, 20.3% had attended Grades 9–10, 17.4% had completed secondary school (Grades 11–12), 22.3% received a high school diploma, and 12% had earned a bachelor's degree. From this data, we can note that SMEs' activities provide employment opportunities for both the literate and illiterate segments of the population, from those who had received no formal education to those who reached the primary and secondary school

⁷ The investment, income from other sources, and profit amount are reported in (x1000). Currency used is Ethiopian birr. Exchange rate in the 2016 year: Average 1 US dollar= 22 Ethiopian birr.

⁸ See Questionnaire in the Appendix H (iii) for items used to measure social ties, business ties, and business resilience constructs

grades, and university graduates. As shown in Table 1.4 below, there is a difference between women and men regarding educational level. The Table indicates that 21 (5.1%) of the women and 4 (1%) of the men had not received any formal education (illiterate). Similarly, 29 (7.1%) of the men and 20 (4.9%) of the women had earned a bachelor’s degree. Hence, based solely on the respondents’ level of education, men could have a higher probability than women of running a successful business and use EO productively to manage constrained resources.

Table 1.4 Education status and Age characteristics of the respondents by gender

Gender	Educational status							Age (mean & SD)	Total
	Illiterate	Grade 1-6	Grade 7-8	Grade 9-10	Grade 11-12	Diploma	Bachelor Degree & above		
Female	21 5.1%	31 7.6%	18 4.4%	35 8.6%	37 9.1%	40 9.8%	20 4.9%	35.05 (8.7)	202
Male	4 1.0%	17 4.2%	23 5.6%	48 11.8%	34 8.3%	51 12.5%	29 7.1%	35.08 (8.5)	206
Total	25 6.1%	48 11.8%	41 10.0%	83 20.3%	71 17.4%	91 22.3%	49 12.0%	-	408

In brackets-SD

1.5 Contributions to theory and practice

In the broader field of entrepreneurship, SMEs have become a key factor for employment and economic growth in both the developed and developing countries. Specifically, in DCs like Ethiopia, SMEs have faced turbulent, chaotic business environments. This research, therefore, focuses on how to promote the sustainability of these enterprises from a resilience point of view and advance the foundation of resilience research that concentrates on the discrete nature of disruption in the developed world and the persistent business disruptions experienced in developing countries. This thesis reports the findings from five studies, which, when combined, contribute to a more thorough understanding of and new insights related to the definition of resilience and its measurement, as well as EO’s resource orchestration processes used to advance SME development in turbulent, resource-scarce business contexts, such as in Ethiopia. As poverty is a critical issue in countries like Ethiopia, linking firm performance to livelihood and exploring the survival strategies supporting entrepreneurs’ in turning firm performance into improved family livelihood conditions are also discussed in this thesis.

Grounding insights on resilience. Research on the resilience concept is surging, but it is nascent in the management and SME fields. The literature on SME-oriented resilience definitions has remained fragmented and vague, and there is a gap in the literature as no published research is available on the topic of resilience measurement in the SME context. Furthermore, there are contextual differences in understanding the concept, and much of the research work conducted thus far relies on the discrete nature of disruptions, such as extreme weather events and other disasters. Turbulent business conditions threatening the existence of SMEs are persistent and affect them daily in DCs like Ethiopia. Research dealing with resilience in such circumstances remains absent from the existing literature. Because resilience is a context-dependent concept, the resilience of large firms differs from small companies and depends on the nature of disruptions in different environments. As such, any research into firm resilience is highly entrenched in the context of the particular study. This study has structured the literature systematically to generate a comprehensive definition of the concept in the current context and contributes to the resilience literature by developing and empirically testing a robust resilience-measurement approach using data generated in Ethiopia.

Building business resilience. In this part of the study, the key question revolves around opening the ‘black box’: Why does firms’ level of resilience differ in the face of disruption. This study, by combining ROT processes with EO, investigates the EO driven processes of resource orchestration and its outcome, business resilience. Extending the resource-based view (Barney 1991), this study adopts ROT in combination with EO, as suggested by various researchers (e.g., Hughes et al. 2015, Miao et al. 2017), to explore the relationships between resources and firm resilience.

Contributing to family livelihood. Livelihoods in such environments are complex and dynamic, and one constant may be the day-to-day uncertainty of survival (see Marschke and Berkes 2006). Thus, investigating the specific relationship between business resilience and family livelihood is important. However, scant research is available on survival strategies supporting the turning of firm performance into a better family livelihood in the study context. There are two compelling reasons for researching the value of firm resilience to livelihood in the context of Ethiopia. First, in Ethiopia, the urgency for livelihood improvement is high on the political agenda. Although efforts have been made by successive governments to accelerate economic growth through several strategic decisions, including structural transformation, attracting foreign direct investment,

diversifying the economy, and enacting policy frameworks that favor small-business ownership and, at most, initiating employment, poverty remains a major concern (Berhanu and Poulton 2014). In terms of the Human Development Index report (UNDP, 2011), Ethiopia ranked 174th out of 187 countries, and the lives of millions of people continue to depend on some form of food aid (Berhanu and Poulton 2014). Second, despite the complexity of the present situation in the country, including political turmoil, it is blessed with an abundant supply of enormous human and untapped natural resources. The country has very high potential but has been slow to develop vibrant SMEs (Rijkers and Costa 2012). Given the significance of SMEs to livelihood improvement, this study sought to identify the contribution of SMEs to the family livelihood of Ethiopian entrepreneurs.

In addition to theoretical contributions, this research project, with its five studies, also contributes to tackling problems that are of interest to practitioners and policymakers. For example, although policymakers recognize SMEs' importance, they have limited research-based insight into how the resilience of these enterprises can be increased to make them sustainable. Specifically, the main theoretical and empirical contributions of this study can be described as follows:

1. Structuring the resilience literature in the SME context: definition, measurement, and inventories of the variables influencing the development of small firms' business resilience. Specifically, we contribute to the multidimensionality of the concept of resilience as defined in an SME context integrating the concept of seizing business opportunities into the definition.
2. Developing and validating a robust tool for use in measuring resilience in an SME context based on data collected from firms operating in developing countries, which is a highly vulnerable, resource-scarce context.
3. The connection between resource orchestration theory (ROT) and EO, as well as network contingency in terms of the moderating role of social networks.
4. A contingent, dynamic resource perspective on explaining the varying levels of firm resilience.
5. The elaboration of resource orchestration processes—resource structuring (mainly resource acquisition), bundling, and leveraging actions taken by SMEs— and EO as the potential driver of managing ROT processes that impact firm resilience in turbulent, resource-scarce environments.

6. As firm resilience is not viewed as an end goal, we contribute to understanding the relationship between firm resilience and the livelihood of the entrepreneur's family. We identify survival strategies that strengthen firm resilience's contribution to family livelihood.

1.6 Outline of the thesis

This thesis is a synthesis of five studies and is comprised of seven chapters.

- *Chapter 1* presents an introduction to the thesis, including the background for the thesis and an outline of the rationale and theoretical frameworks utilized across the five studies in the context of Ethiopia. Parallel to broader ongoing research seeking more effective practices that improve SMEs' resilience, an opportunity is identified that addresses non-farm entrepreneurship in the context of DCs and the importance of building their resilience, an area of research that is currently underdeveloped. The research questions, study design (i.e., methodology), and contribution of the thesis are explained, and the thesis' structure is outlined in this chapter.
- *Chapter 2* presents a systematic review of the resilience literature in relation to SMEs, especially in persistently turbulent, resource-scarce environments, which are common in developing countries. This part of the discussion provides additional insight into the ongoing controversies regarding resilience in business studies, especially SME-related topics. It also enriches the line of SME resilience studies by tracking and highlighting the concept of definitions, measurement, and factors assumed to influence the creation of resilient SMEs in the face of disruptions and resource scarcity. While reviewing the resilience literature, it was felt that the conceptualization of resilience as revolving around capability and vulnerabilities, a concept closely related to resilience, would provide a fuller understanding of resilience. An increase in capability helps to minimize vulnerabilities, and capability has two dimensions: dynamic and operational. Both are the critical components of SME resilience definitions. While the dynamic capability emphasizes adaptability and opportunity recognition, which is more of a strategic aspect, operational capability focuses on the performance and growth aspect of these companies. Although this endeavor has exposed much interrelatedness of both operational and dynamic capabilities, both serve as a foundation for conceptualizing the resilience construct; it ultimately led to the application of a 'complexity-based thinking'

perspective for a fuller understanding of the resilience concept in the SME literature. The primary purpose of a literature review is to identify gaps in the knowledge base where an original contribution can be made. The literature review also provides the basis and justification for elements to be included in the development of analytical and reflective frameworks, leading to the three research questions of this thesis.

- *Chapter 3* provides the development and validation of resilience measurement of SMEs in DCs. The aim, here, is to develop a robust tool for measuring the resilience of SMEs in the face of disruptions, resource scarcity, and vulnerabilities, which are common in many DCs' business environments. To ensure the robustness of the measurement, we apply confirmatory factor analysis and invariance tests using survey evidence from Ethiopia.
- *Chapters 4 to 6* present the three empirical studies, respectively. Each chapter follows the structure of the research paper that has been prepared for publication, including an introduction, as well as the theoretical framework and hypotheses, methods, results, discussion, and conclusions.
- *Chapter 7* discusses the five studies' main findings, conclusions, limitations, and implications for the literature, policy, and future research. Figure 1.5 presents the thesis' overarching framework.

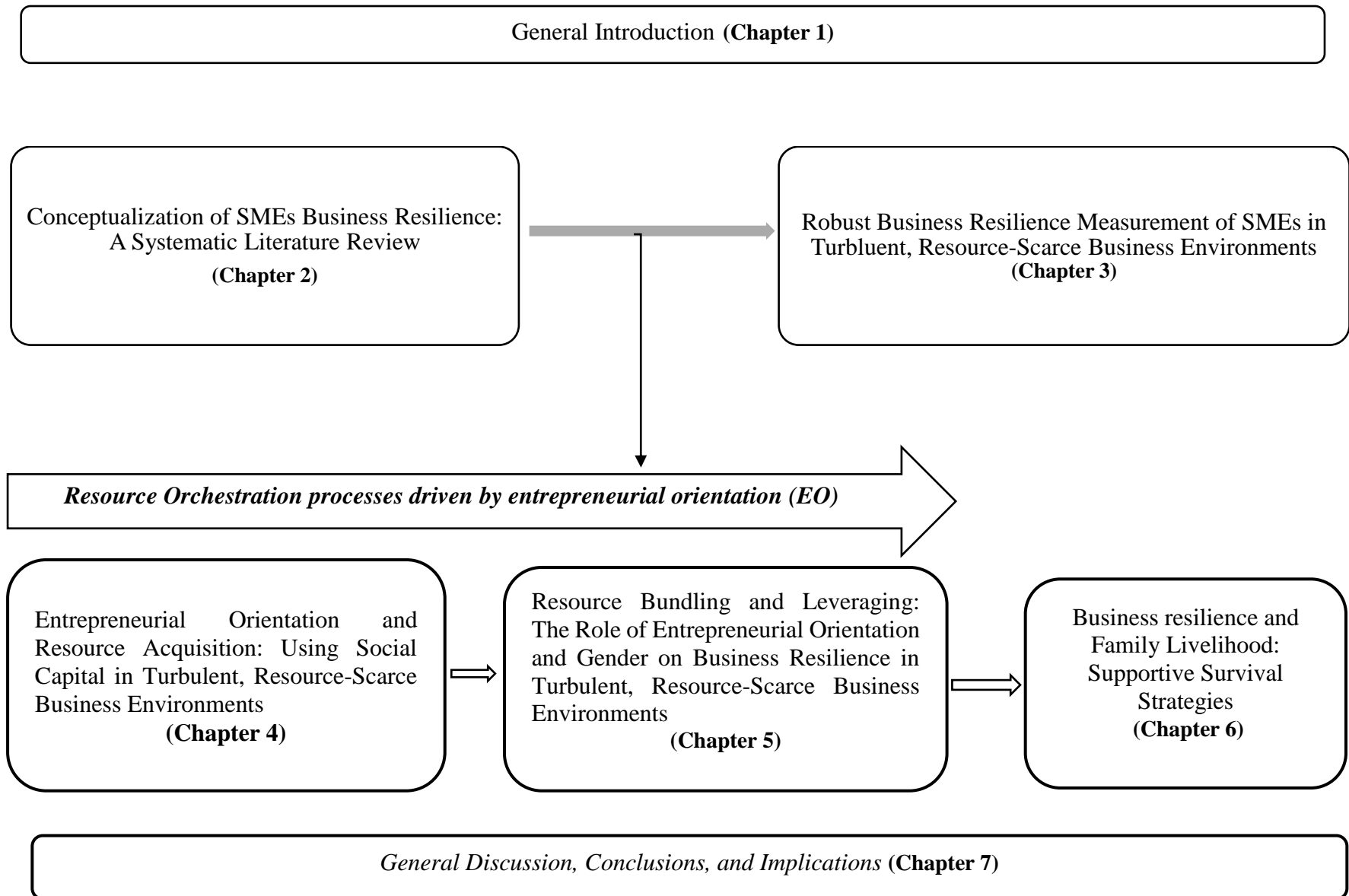


Figure 1.5: PhD thesis outline

Chapter 2

Conceptualization of SMEs' Business resilience: A Systematic Literature Review

Abstract

Attention for business resilience research in the academic world has increased considerably during the last decade looking at the number of papers published, despite fragmented literature on definitions, measurements and, and of variables influencing the concept. Therefore, there is a need to take stock of current knowledge on the areas and structure them to lay the foundation in this field. We also give due attention to the resilience of SMEs in a highly vulnerable setting (i.e., developing countries), as the nature of this settings requires resilience research attention (in terms of rate of recurrence and complexity of disruptions). We deployed a well-structured systematic search & review procedure. First, we defined key search terms and then applied them to multiple databases (Scopus, Web of Science, Google Scholar, Emerald, and Science Direct) to gather relevant papers for the review. To make our literature review more encompassing, we augmented the search process with co-citation and reference checking techniques. This paper offers (1) an overview of SMEs resilience literature from 2000 up to November 2018 comprising 118 articles, and (2) special attention, within that overview, to developing countries. This review concludes that resilience literature is very much varied in its definitions and measurements, and is inconclusive about its influencing factors. Furthermore, little resilience research has focused upon the context of SMEs in developing countries, which is perhaps surprising given the contribution made by these businesses in such a setting. On the bases of how the concept of resilience emerges from the literature, we describe distinguishing features of resilience, give options to extend the theoretical foundations of research into resilience and outline concrete ideas for further research. Moreover, we show that to date research on SMEs resilience in extremely vulnerable settings is lacking and we pointed to the interesting potential it holds for scholars and practitioners.

Keywords: Business resilience, resilience, SMEs, systematic review, vulnerable contexts

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2.1 Introduction

Resilience research is highly desirable as it addresses the urgency to investigate vulnerable situations in which small and medium-sized enterprises (SMEs⁹) act (Kantur and Say 2015, Ates and Bititci 2011, Burnard and Bhamra 2011). SMEs take a significant portion of the GDP and livelihood conditions of millions of people worldwide including developing countries (DCs) (Sabatino 2016, Dahles and Susilowati 2015, Williams et al. 2013, Alberti et al. 2018). Fostering SMEs is seen as a vital device to tackle the socio-economic problems that bedevil DCs presently, especially through problems of high unemployment and poverty (Page and Söderbom 2015). Resilience and SMEs each by themselves and their combination, i.e. resilience of SMEs, have been high on the agenda of academics and policymakers in recent years (Alberti et al. 2018) and thus subject to scientific and policy debate (Williams and Vorley 2017, Linnenluecke 2017). Hence, scientific and policy interest is present to urge a relevant extension of the body of knowledge, however for reasons of inconclusiveness studying the resilience of SMEs has been labelled as challenging (Dahlberg and Guay 2015, Tognazzo et al. 2016). This inconclusiveness regarding an agreed-upon definition and measurement of SME's resilience, and influencing variables (Dahlberg and Guay 2015, Tognazzo et al. 2016), issues essential for doing robust research, hinder building a consistent body of knowledge on SMEs resilience.

With this literature review, we attempt to respond to the call for more resilience research, which in detail generates more understanding from SMEs perspective (Annarelli and Nonino 2016). Although reviews of literature on resilience of larger organizations (e.g., Linnenluecke 2017, Bhamra et al. 2011, Annarelli and Nonino 2016), and in interrelated disciplinary streams, such as from a supply chain point of view (e.g., Kamalahmadi and Parast 2016) are published, specific SME resilience is to our knowledge not yet explored by means of a review. Also, the mentioned reviews of resilience research tend to focus on specific or event-based disruptions rather than on the recurrent and complex nature of disruptions.

Section 2.2 outlined the methodological approach adopted for the literature review. In section 2.3, we discussed the key results of the study. More specifically this literature review on resilience aims at (1) gaining insight into the multi-faceted aspects of resilience

⁹ The terms 'business' and 'enterprise' are used interchangeably and following Page and Soderbor (2015), SME is defined in this study as enterprise having less than 250 employees, a common phenomenon in most DCs. Additionally, SMEs are viewed as companies that is highly characterized by the resource scarcity and personal management of the firm owners' (Sullivan-Taylor and Branicki, 2011).

conceptualization in an SME context and formulating a comprehensive definition (2.3). Developing an agreed-upon definition of the concept is labelled by Linnenluecke (2017) as a necessary condition to advance research on measurement, strategic initiative and factors building the resilience of SME. (2) Inventorying measurements and methods of SME resilience research to date (2.3). (3) inventorying research methods applied in resilience research (2.3). (4) Identifying and categorizing factors influencing SME's resilience (5) listing theories deployed in SME resilience literature. In section 2.4, we present a brief discussion of the main findings. Section 2.5, finally draws future research directions, limitations, and conclusions of the research.

2.2 Methods

The review work has the following distinctive features: (1) its focus on SME literature; (2) sources of research from multiple databases (Scopus, Web of Sciences, and Science Direct, Emerald, and Google Scholar); and to make the review more comprehensive, (3) a manual exploration of additional research that may have fallen outside of the initial search, reference and citation checking by focusing on frequently cited papers; (4) the search period covering up to November 2018; (5) the particular contribution of work on entrepreneurship and resilience in the context of DCs remains limited (Linnenluecke 2017). Review of literature takes a key position in the hierarchy of scientific evidence-based knowledge generation (Tranfield et al. (2003). To ensure that the body of research to be included in our review was sufficiently broad and rigorous, we followed a stepwise systematic review approach. Tranfield et al. (2003) recommended these sequential steps as relevant to conduct a well-structured and evidence-informed literature review. In this study, we used a stepwise approach as developed by Tukamuhabwa et al. (2015): (1) searching, (2) screening, and (3) coding and analyzing. Figure 2.1 below elucidated an overview of the processes undertaken to review the literature.

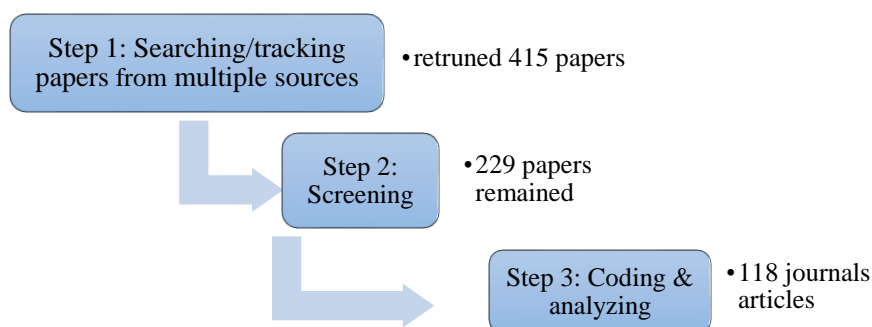


Figure 2.1: Overview of the review process – searching, screening, coding and analyzing the articles.

To minimize bias and to improve the validity of findings, the outline of the approach adopted for searching, screening, coding and analyzing the journal articles, will be presented below. This includes the criteria involved in sourcing relevant literature and the search strings used, which enhances transparency and aids replication (Tukamuhabwa et al. 2015).

Step 1: searching. Searching the literature is the primary step to accumulate the relevant papers for analysis and then generate insights. In this step, we executed two activities. First, we outlined key search terms/words: ‘SMEs resilience’, micro-enterprises resilience, ‘resilient SMEs’, ‘organizations business resilience’, and ‘small and medium enterprises resilience’ (and the substring of these terms). Second, applying these search terms, we tracked publications from those different sources by pointing the search to “all fields” (i.e. not limiting the search to the title or keywords). This initial search stage resulted in 415 sample papers which were fixed as the basis for the next steps.

Step 2: Screening. First, we checked and excluded duplicated publications since most of them are combined from multiple sources. Second, we set the criteria for inclusion or exclusion of papers. The general criterion was the relevance of the paper to the topic. For this (a), we checked each paper’s abstract and excluded papers that conceptualized resilience as psycho-entrepreneurial quality because our unit of analysis is firm level. We moved further and (b) closely studied (closer screening) each paper to judge based on definitions, measurements, and factors discussed to influence SMEs resilience. This step reduced the number of papers from 415 to 229.

Step 3: Coding, analyzing and synthesizing. We exported those 229 papers to an excel sheet and then introduced a common code to label papers based on types (proceedings, conference papers, PhD thesis, & journal articles). We found that out of the 229 documents, 118 were articles in scientific journals. We limited our analysis to these journal publications following the recommendation of amongst others Wales et al. (2013). The justification for this section is that articles are subjected to a rigorous peer review process (Miller and Serzan 1984), and in line with that, that they are generally believed to be of a higher quality than non-journal articles such as book chapters or unpublished works (see Wales et al. 2013, Rauch et al. 2009). Thus, in this study, we used the selected 118 articles as the basis for this paper literature review from which the results are presented in the next section.

2.3 Results

Extrinsic attributes of publications

The origin of the concept ‘resilience’ dates back to Holling's publication in 1973 (Holling 1973) in which he described the concept as the ability of an ecosystem to respond to unexpected environmental changes and return quickly to its original condition. Now, it becomes both a multi-faceted and multidisciplinary concept (Kantur and Say 2015) employed in various disciplines. In particular, business and management studies show a considerable growth of research on resilience coming from the SME field as well. Figure 2.2 shows that there was a little variation in the number of articles between the years 2003 until 2008/09. 2008-2009 were the years in which the financial crisis started which seemed a triggering point for resilience articles in SME context (Annarelli and Nonino 2016). There is a notable increase in the number of SMEs resilience articles after 2008/09 years (see Figure 2.2).

Figure 2.2 exhibits as well that only a few articles related to organizational (business enterprises) resilience were published between 2002-2005 years. These articles stem from strategic and supply chain perspectives. These findings coincide with reviews of, e.g., Annarelli and Nonino (2016) on supply chain and operation management resilience literature. Kamalahmadi and Parast (2016) note that the challenges and opportunities that highly threatened business companies in low-cost countries were happening between 2002 to 2005 drove those initial researches on enterprise resilience. To conclude, the trend shows the increasing presence of resilience research in an SME context.

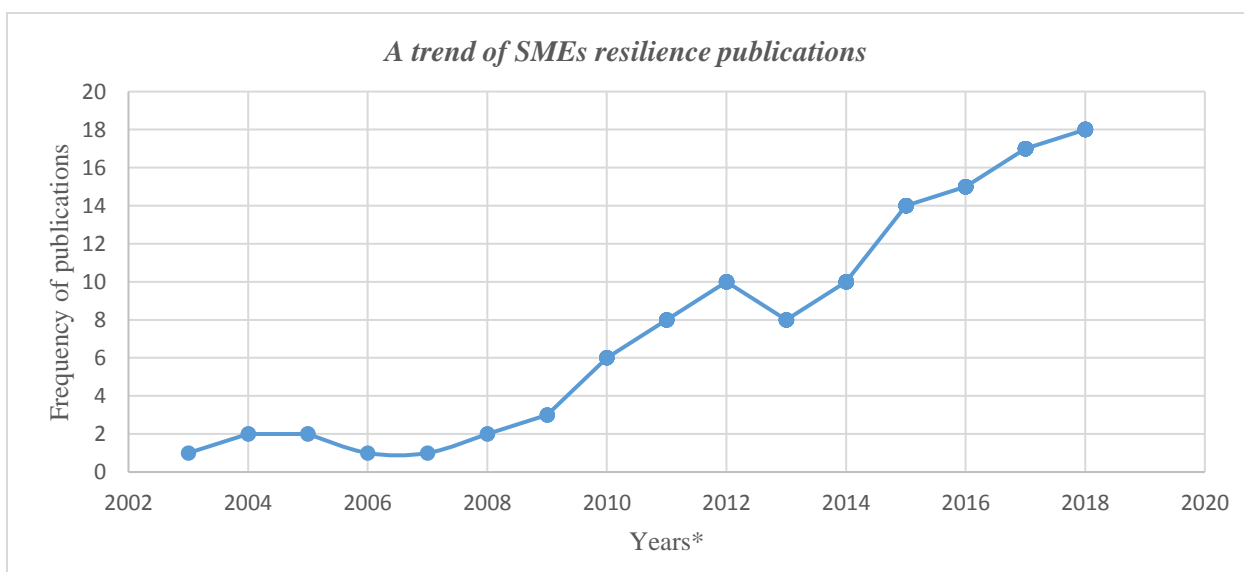


Figure 2.2: SME resilience publications distribution by years (*Based on data until November 2018).

The articles were published in a wide range of journals spreading from Q1 to Q4 ranks (see Table 2.1, in Appendix A). In 2003 the Harvard Business Review (e.g. Hamel and Valikangas 2003), and in 2005 the MIT Sloan Management Review (e.g. Sheffi and Rice 2005), were among a few journals that started to publish work related to enterprise resilience for the first time. Recently, a rising number of business and management journals also started to publish related articles. For example, European Management Journal (e.g. Lampel et al. 2014); Journal of International Business Studies (e.g. Branzei and Abdelnour 2010), and Journal of Cleaner Production (e.g. Moore and Manring 2009) can be mentioned. Among this list of journals (see Table 2.1, in Appendix A), the journals of International Production Research and Entrepreneurship & Regional Development have published the highest number of articles related to the topic.

Figure 2.3 presents a list of societal contexts in which SMEs resilience research has been undertaken. The rising of natural disasters, conflicts, and political crisis states, institutional failures, economic recessions, and human errors to mention a few, have motivated researchers to examine the applicability of resilience, originally theorized in Canada by Hollings (focusing on ecological resilience), within other environments or cultural contexts (Linnenluecke 2017). Indeed, Dahles and Susilowati (2015), and Linnenluecke (2017) suggested, need to contextualize resilience concept understanding to advance knowledge on SMEs, prompting an investigation of the concept in other environments such as in developing countries. To understand the international variety in SMEs resilience literature, we categorized the existing publications based on the author's researched countries and then aggregated them to clustered regions. Past research recommended global clustering countries based on similarities of culture, geo-demographic factors and history into the same region/cluster (Hofstede, Wedel, & Steenkamp, 2002). Hence, to cluster countries in this study into different regions, we followed a global countries clustering arrangement as used by Wales et al. (2013). Wales et al. (2013) argued, this clustering of global countries into the different region is 'the most recent and also includes several countries not covered elsewhere' (Wales et al. 2013: 364).

Our purpose in this part of the review is to evaluate the SMEs resilience research attention in different environments and cultures. Our premises is that having insight in how SMEs act to deal with challenges in different business environments is pertinent to enrich the applicability of the concept in the real world (see Chu 2015, and Tengeh 2016), and to lay its theoretical foundation in the SME field. Other researchers (e.g., Linnenluecke, 2017) asserted this idea,

stating the knowledge that can be gained on business resilience of companies from diverse contexts will help to promote the pluralistic debate in the literature. Moreover, by relying on those limited publications coming from a specific region, it is difficult to generalize on how to build resilience (Dahles and Susilowati 2015) of SMEs in different areas. This is because (regional) contextual differences that drive the resilience development of SMEs in the different areas need special attention (Littlewood and Holt 2018).

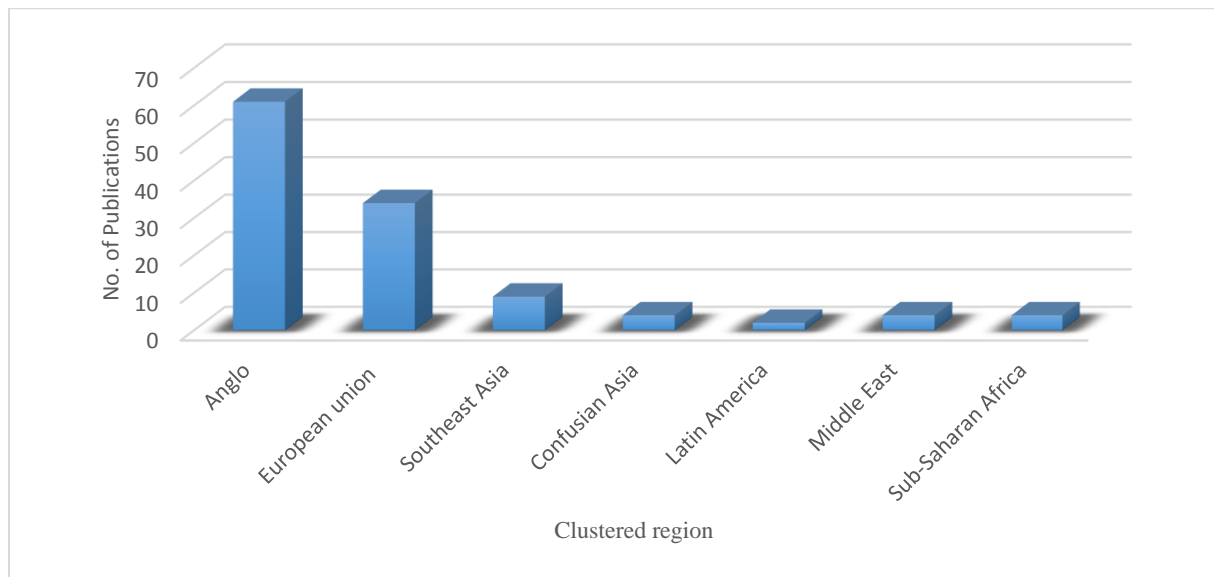


Figure 2.3: The distribution of publications by region¹⁰

Figure 2.3 illustrates the distribution of SMEs resilience publications based on clustered regions. As shown in this figure, the majority of SMEs oriented resilience studies (i.e., 81%) has been conducted in countries in the Anglo and the European Union region clusters. The remaining publications are positioned in Southeast Asian, Confusion, Latin America, the Middle East, and Sub-Saharan African countries. This finding clearly shows that the research on SMEs resilience in developing countries (DCs), i.e. in Asia, the Middle East, Latin America, Sub-Saharan African countries, has received, hitherto, limited attention.

This finding on the geographic distribution of research is in accord with Linnenluecke (2017) review, who concluded that research on business resilience in general business and management has concentrated on the developed world context. Although there have been a few studies on resilience done generally in DCs, the number of publication on South East Asian countries (i.e.,

¹⁰ The classifications used are : (a) Anglo (Australia, Canada, New Zealand, UK, USA, & South Africa) (b) European union (Denmark, France, Greece, Italy, Portugal, Serbia, Kosovo, Romania, Spain, & Sweden) (c) Confusion (China & Japan) (d) Latin America (Brazil) (e) Middle East (Turkey & Iran) (f) Southeast Asia (Indonesia, Malaysia, India, Thailand, & Philippines) (g) Sub-Saharan Africa (Ghana & Sudan).

Thailand, Malaysia, and Indonesia) is a notable exception. On those countries, there is in recent times a growing number of studies on the devastating effect of natural disasters threatening SMEs functioning in the tourism sector and ultimately their existence (Biggs et al. 2015).

We studied the literature to understand the factors triggering resilience research in the past. In line with Kantur and Say (2015), we also observed a majority of publications centring on discrete/event-driven disruptions such as to the financial crisis and natural disasters. However, these discrete disruptions can be acute but specific and temporary. Most of the past studies on organizations resilience evaluated these event-driven disruptions and then tried to derive insights on how to improve enterprises resilience in the future (Linnenluecke 2017). The question raised here is; is it possible to generalize understandings gained from discrete disruptions to persistent and multi-faceted nature of disruptions, which is a phenomenon of developing countries (DCs) business environment (Littlewood and Holt 2018). According to Dahles and Susilowati (2015), although SMEs, in general, face increasingly troublesome conditions compared to the developed world, the environments in DCs are harsher for them leading to a higher failure rate (Page and Söderbom 2015). The nature of disruptions threatening SMEs' resilience varies from context to context (Littlewood and Holt 2018, Abebrese 2015). (Abebrese 2015) argued that SMEs in DCs faced recurrent and multifaceted troubles ranging from natural disasters, political turmoil, and economic crisis, market access challenges, institutional failures and to infrastructural obstacles. Thus, research on the resilience of SME in this turbulent setting is more desirable as it advances our theoretical and practical understanding of the concept in the SME field.

Defining Resilience in an SME Context

Factors underlying the fragmented understanding of resilience

Williams and Vorley (2017) make clear that the agreed-upon meaning of the resilience concept remains vague in business literature. (1) Disciplines, (2) research context, (3) nature of disruptions, and (4) companies' size are core factors that underlie this fragmented understanding of the concept of resilience.

(1) Differences in the focus of the disciplines. Researchers in different disciplines have used and followed, different conceptualisations. This idea was asserted by Dahlberg and Guay (2015), who concluded to a lack of common understanding of resilience across subjects such as ecology, engineering, and social psychology. For example, in the engineering and physical science domain, resilience states that systems or organizations return to their original state after

specific disruptions. This return of organisations to the original state after a disruption is, in fact, acknowledging only one equilibrium. However, in other disciplines mainly from social sciences like psychology, the focus of resilience is on organizations' adaption (positive performance) amid continuing and unfolding disruptions. Because disruptions have become ongoing, companies are facing complex daily situations. Understanding the nature of disruptions facing companies from this perspective underlies the presence of multiple equilibria (Linnenluecke 2017). Researchers in the business domain without contextualising these issues have taken the research on the concept to business and SMEs fields. According to Williams et al. (2013), the idea of resilience in entrepreneurship up to now is often used to label firms' economic performance and responsiveness in light of specific shocks, such as financial crisis and recession (see Williams et al. 2013, pp: 399). This kind of understanding which restricts the meaning of resilience to the ability of firms to bounce back from such a specific "disruption", has been called "engineering resilience" (Conz et al. 2017). This type of resilience conceptualisation is in line with a "machine" view of organisations with simple cause and effect dynamics (Tognazzo et al. 2016, Lengnick-Hall et al. 2011) and limited the meaning of the concept to bouncing back from a specific crisis event. Preferably it does not designate companies' adaptability and sustenance of positive performance amid of continuing challenges. Thus, future researchers have to come up with a meaning of resilience capturing all these debates into account in SME literature.

(2) *Research context and complexity of disruptions.* Is resilience triggered by the specific or persistent multifaceted disruptions as well? Relatedly, this is also the second issue for inconsistent use of the concept definition in past research. The nature of disruptions may not only be specific but can also be frequent and a day-to-day phenomenon. They may vary from context to context. Indeed, the firm's vulnerability to disruptions may contextually differ (Linnenluecke 2017). Notwithstanding this fact, prior research on resilience has associated the concept to only specific/event-driven/discrete disruptions, e.g., the 2008/09 global financial collapse occurring in the developed world (Pal et al. 2014). In developing countries (DCs) business companies face however unfolding and multifaceted disruptions (Linnenluecke 2017, Tengeh 2016). These may relate to their external environments, incorporating issues such as political-riot and conflict (Branzei and Abdelnour 2010); poorly functioning markets and infrastructures (Tukamuhabwa et al. 2015); institutional inefficiencies (Dahles and Susilowati 2015); and natural environmental challenges (Linnenluecke 2017). The consequence of this is that how firms manage and respond to chaotic situations facing them, may likely vary (Branzei

and Abdelnour 2010). To understand how SMEs overcome these turbulent business environments, the DCs seem to offer a suitable setting (Littlewood and Holt 2018).

(3) *Firms' Vulnerability difference in size.* The definition of resilience can also differ when taking into account the size of companies (Sullivan-Taylor and Branicki 2011). Concerning the specific SME context of studying resilience, Ates and Bititci (2011) pointed out that, 'there has been an implied assumption that organizational theories, processes, and conceptual frameworks developed through researching large organizations, are relevant and directly applicable to SMEs'. However, these authors point to significant differences in the way that SMEs operate and how their vulnerabilities differ compare to those of larger enterprises (Sullivan-Taylor and Branicki 2011). Becoming resilient may even be more critical for SMEs because they are more vulnerable due to challenges such as accessing finance and restrictions due to their limited size (Tognazzo et al. 2016, Branzei and Abdelnour 2010). Branzei and Abdelnour (2010) emphasise the latter by pointing to the cascading and aggravating hurdles related to financial and human resources which also makes SMEs more vulnerable to failures (Branzei and Abdelnour 2010).

In summary, these above-discussed factors are fundamentals to inconsistent use of the concept meaning in the past literature, indicating the need to find common ground to build the theory in business and SME literature. As such, advancements of the concept in business research will likely come by involving these issues. Having clarity of these factors provides an essential foundation to advance research moving forward on business resilience in an SME field.

A literature search on resilience. The resilience concept emerged in SME literature by drawing on the diverse perspectives from various disciplines to which the broad concept of resilience is relevant (Akgün and Keskin 2014). Hitherto, there is no unified definition of resilience in the business and management field (Williams and Vorley 2017). Indeed, several authors highlighted the need of research attention to advance research on resilience in the general business and specifically the SME field (Tognazzo et al. 2016, Williams et al. 2013).

To gain insight into the resilience of SMEs and especially in the characteristics which attributed to resilience, we made a step-wise analysis of resilience definitions as used in research. The first step was to make an overview of resilience definitions (see below Table 2.2). Then, we carefully studied the definitions and developed common characteristics as shown in the

following Table, Table 2.3. Findings shown in the Table 2.3¹¹ demonstrate that the definitions used by the following sets of authors (Gunasekaran et al. 2011, Biggs et al. 2015, Ates and Bititci 2011), have incorporated most of the common characteristics including adaptability, maintaining positive performance (growth), responsiveness, competitiveness and firms ability to minimize vulnerabilities as well as their fast recovery from a disruptive state. These definitions are the most comprehensive in defining resilience in the SME context. However, like all definitions, these authors overlook the aspect of seizing opportunities within disruptions (see the final column in Table 2.3). Nevertheless, a growing number of scholars call this aspect fundamental to business organizations resilience definition (Abdullah et al. 2013, Lengnick-Hall et al. 2011, Hamel and Valikangas 2003).

Concerning the characteristic of seizing business opportunities, Lengnick-Hall et al. (2011) contended that resilience in business organizations looks beyond restoration as it describes the development of new capabilities to deal with disruptions and changing circumstances in the business environment. From this perspective, the capability to identify, recognize and seize business opportunities (Manfield and Newey 2017, Hamel and Valikangas 2003) within challenging business environment is a desirable attribute in defining resilience of SME. In other words, a turbulent business environment not only hold threats but also contain opportunities that need to be exploited (Hamel and Valikangas 2003) to maintain firm continuity and success. This idea is also supported by Branzei and Abdelnour (2010) empirical research in the Darfur region (conflict zone) of Sudan indicating business can flourish to a large extent even under adverse circumstances. In this line, the resilience definition for SMEs without involving the ability to seize business opportunities is incomplete. Moreover, some authors consider this aspect in their operationalization of the concept without mentioning it in their resilience definition. For example, Biggs et al. (2015) attempt to integrate the aspect while operationalizing the resilience construct, though they did not address it in their resilience definition. Based on these research experiences, we argue that this aspect should be part of defining resilience in the SME context.

Furthermore, we studied those tracked definitions especially to understand how the resilience concept has been conceptualized and operationalized in each research. We identified that the literature lacks a clear conceptual approach. This may be due to a lack of research that structures

¹¹ *The last column of the Table 2.3 shows the frequency of the characteristics used by researchers in describing resilience. Based on this characterization the three authors able to score the highest frequency among others.*

various fragmented understandings of the concept in the existing literature (Kantur and Arzu 2012). In some literature, performance is considered part of a dependent variable resulting from resilience-enhancing (Lengnick-Hall et al. 2011). This can be referred from the works of (e.g. Lengnick-Hall et al. 2011, Akgün and Keskin 2014). These authors have conceptualized resilience as a capability (which is formed from a bundle of resources) influencing firm performance. While in others, performance is considered as part of the definition of resilience (Torres et al. 2018). For example, researchers (e.g., Tognazzo et al. 2016, Pal et al. 2014) framed resilience as an outcome variable that can be characterized by firm positive financial performance. In some other studies, the financial performance and capability characteristics of resilience have been conceptualized as separate issues. The analogy is that firm capability is explanatory, and the firm performance is an outcome or dependent variable. Kantur and Say (2015), however, highlighted that such disjointed conceptual approaches create confusion about resilience meanings. In this chapter, we conceptualized resilience as an outcome variable containing the aspects mentioned above.

A combined definition. Resilience can be defined by a combination of ‘a portfolio of capabilities’ (Manfield and Newey 2017). Markman and Venzin (2014) discuss the term resilience addressing diverse managerial constructs including the firm’s performance growth amidst of disruptions. This coincides with the idea (e.g., Biggs 2011, Biggs et al. 2015) that the term resilience is multidimensional. SMEs resilience is often described in the literature by firm survival, minimizing vulnerability, fast recovery, sustainability, performance growth, responsiveness, and development of new capabilities and opportunities within a challenging environment. A number of researchers have synthesized the interrelatedness of these different attributes of resilience (Wedawatta et al. 2010, Ates and Bititci 2011). For example, Manfield and Newey (2017) show that these attributes or elements of resilience can be combined into capabilities. According to Biggs (2011), vulnerability and adaptive concepts are linked and combined into resilience capability at the organization level. The management of vulnerabilities and responsiveness refers to the adaptation aspect of companies’ to changing and complex situations in their environments. The sustainability and competitiveness terms signify keeping positive performance (growth).

Table 2.2: Resilience definitions in SMEs context

Author(s)/year	SME resilience is defined as
(Acquaah et al. 2011)	<i>The capability of firms to persist in the face of substantial changes in the business and economic environment and the ability to withstand disruptions and catastrophic events using various strategies.</i>
(Adnan et al. 2016)	<i>Ability to sustain income and as strategies to develop the spirit of social duty despite cultural and social barriers to women entrepreneurialism.</i>
(Akgün and Keskin 2014)	<i>The capacity to absorb shocks effectively, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize on disruptive</i>
(Aleksić et al. 2013)	<i>The ability of an organization to withstand systematic discontinuities as well as the capability to adapt to new risky environments</i>
(Alonso and Bressan 2015)	<i>The ability to survive, adapt and thrive despite challenges.</i>
(Amann and Jaussaud 2012)	<i>The ability a firm to take situation-specific, robust and transformative actions when it confronts unexpected and complex events that have the potential to jeopardize its long-term survival and performance</i>
(Sanchis and Poler 2014)	<i>The capacity to withstand systemic discontinuities and adapt to new risk environments so that the enterprise can uncover and adjust to continually changing risks, endure disruptions and create advantages over less adaptive competitors</i>
(Ates and Bititci 2011)	<i>The capacity of SMEs to survive, adapt and grow in the face of turbulent change and crisis.</i>
(Biggs et al. 2015)	<i>The capacity of a firm to survive, maintain performance, income, employment, adapt to challenges by minimizing vulnerability situation facing them (i.e., disaster threats)</i>
(Branzei and Abdelnour 2010)	<i>The psychological mechanisms of positive adaptation and generate income in the face of the terrorism outbreak, escalation, and reduction situations.</i>
(Burnard and Bhamra 2011)	<i>The ability to resist systematic discontinuities and the capability to adapt to new risk environments.</i>
(Carvalho et al. 2016)	<i>The ability and capacity of an organization to withstand unexpected changes, discontinuities, and environmental risks.</i>
(Castellacci 2015)	<i>The ability of an organization to adapt to changes in its economic and institutional environment</i>
(Cheese and Cheese 2016)	<i>the ability to manage vulnerabilities and adaptive response in the turbulent environment</i>
(Chiesi 2014)	<i>The ability of firms to survival and adaptability and growth despite the global economic recession</i>
(Conz et al. 2017)	<i>The power of small enterprises to renew itself through innovative strategies when it faces unpredictable events.</i>
(Dahles and Susilowati 2015)	<i>The capacity of the firm to survive, adapt and grow despite natural hazard crisis, political turmoil and economic recession</i>
(Demmer et al. 2011)	<i>The capability of SMEs to survive and thrive in the face of the global economic crisis and hostile competitive situations</i>
(Dumitraşcu and Dumitraşcu 2016)	<i>The capacity a firm to modify its business models and strategies, depending on the changes that occur in the environments</i>
(Gray and Jones 2016)	<i>innovative performance</i>
(Gunasekaran et al. 2011)	<i>Adaptability, sustainability, vulnerability, responsiveness, and competitiveness in the evolving turbulent global markets.</i>
(Hamel and Valikangas 2003)	<i>A capacity for continuous reconstruction. Strategic response and fitness to shocks from the outside environment</i>
(Huggins and Thompson 2015)	<i>Resistance to shocks, renewal, and recovery or bounce back from shocks</i>
(Lampel et al. 2014)	<i>Greater stability in performance despite economic crisis</i>
(Lengnick-Hall et al. 2011)	<i>The ability to survive, adapt and even thrive on disruptive surprises that potentially threaten companies longevity</i>
(Ortiz-de-Mandojana and Bansal 2016)	<i>The ability to lower financial volatility, record higher sales growth, and higher chances of survival in the long term over 15 periods despite shocks</i>
(Pal et al. 2014)	<i>The capability to overcome crisis and constraints that setback success. It is the ability to survive, adapt, and grow</i>
(Pettit et al. 2013)	<i>The balance of capabilities and vulnerabilities to achieve the desired long-term performance.</i>
(Sanchis and Poler 2014)	<i>ability to return to normal state of operation despite vulnerabilities and threats that faces the business</i>
(Akgün and Keskin 2014)	<i>The proactive measures for forward-looking enterprises and the ability to absorb shocks and keep on normal performance</i>
(Steiner and Atterton 2015)	<i>The improvement includes an aspect of income and employment, household assets and savings growth.</i>
(Sullivan-Taylor and Branicki 2011)	<i>capability and flexibility to manage the threat and actuality of extreme weather events relative to large companies</i>
(Tengeh 2016)	<i>The Survival, growth and thriving despite the hostile business environment, such as during economic, social and political instabilities.</i>
(Tognazzo et al. 2016)	<i>The ability to bouncing back, bouncing-forward, and maintenance of functions over time in the face of economic crisis</i>
(Wedawatta and Ingirige 2016)	<i>The collective of capacity, strategies, and vulnerability in the face of extreme weather events.</i>

Table 2.3: Common characteristics of resilience definition identified from existing literature

Author(s)/Year	Survival/ Recovery	Positive performance (Growth)	Adaptability	Vulnerability	Strategies	Time	Competitiveness	Responsiveness	Seizing opportunities	Frequency of elements
(Acquaah et al. 2011)					√		√			2
(Adnan et al. 2016)		√			√					2
(Akgün and Keskin 2014)	√		√					√		3
(Aleksić et al. 2013)				√						2
(Alonso and Bressan 2015)	√	√	√							3
(Amann and Jaussaud 2012)		√						√		2
(Sanchis and Poler 2014)			√				√			2
(Ates and Bititci 2011)	√	√	√		√		√			5
(Biggs et al. 2015)	√	√	√	√				√		5
(Branzei and Abdelnour 2010)		√	√							2
(Bhamra et al. 2011)	√		√							2
(Carvalho et al. 2016)				√						1
(Castellacci 2015)			√							1
(Cheese and Cheese 2016)			√	√				√		3
(Chiesi 2014)	√	√	√							3
(Conz et al. 2017)					√					1
(Dahles and Susilowati 2015)	√	√	√							3
(Demmer et al. 2011)	√	√								2
(Dumitraşcu and Dumitraşcu 2016)			√		√					2
(Gray and Jones 2016)		√								1
(Gunasekaran et al. 2011)		√	√	√			√	√		5
(Hamel and Valikangas 2003)					√			√		2
(Huggins and Thompson 2015)	√		√					√		3
(Lampel et al. 2014)		√								1
(Lengnick-Hall et al. 2011)	√		√							2
(Ortiz-de-Mandojana and Bansal 2016)	√	√				√				3
(Pal et al. 2014)	√	√	√							3
(Pettit et al. 2013)			√							1
(Sanchis and Poler 2014)	√			√						2
(Akgün and Keskin 2014)			√							1
(Steiner and Atterton 2015)		√								1
(Sullivan-Taylor and Branicki 2011)										1
(Tengeh 2016)	√	√	√							3
(Tognazzo et al. 2016)	√	√				√				3
(Wedawatta and Ingirige 2016)			√	√	√					3

From entrepreneurship perspective, these different attributes (characteristics) of resilience can be classified into operational and dynamic capabilities (Manfield and Newey 2017). While the operational capability focuses on firm growth (growth in financial performance) (Lampel et al. 2014), the dynamic capability holds a number of characteristics comprising adaptability (Biggs et al. 2015), responsiveness (Williams et al. 2013), and firms' seizing business opportunities (Lengnick-Hall et al. 2011) a mid of challenging environments. Defining the resilience concept with only a focus on operational capability dimension may fail to take account of the dynamic capability as the nature of disruptions is unfolding and manifold (Ates and Bititci 2011). The implication of this is that a resilience definition for SMEs encompasses both perspectives and, therefore, will be more comprehensive.

Encompassing dynamic capability is opposed by how resilience is often defined, influenced by physical and engineering that is as a 'passive' term as such term resilience is understood as the capability of SMEs to return to a stable state after a disruption-“bouncing back” from an unpredictable event as an economic crisis (Tognazzo et al. 2016, Akgün and Keskin 2014). Resilience framed this way is simply a reaction to a crisis and is considered a pattern rather than a set of controlled activities and processes (Lengnick-Hall and Beck 2003, Conz et al. 2017). However, since an organization faces multiple disruptions on a regular basis, the ability to withstand systematic discontinuities reactively as well as the capability to adapt to changing to disruptions proactively (Ates and Bititci 2011), even to develop new capabilities (Hamel and Valikangas 2003, Lengnick-Hall et al. 2011), and expanded ability to create new opportunities before disruptions occur, is also desirable. Given that, some authors separate between passive resilience, “the mere ability to bounce back without breaking”, and active resilience, “a deliberate effort to become better able to cope with changes in the environments” (Hamel and Valikangas 2003, Lengnick-Hall et al. 2011). From this perspective, resilience is more than mere survival; it involves adapting, being proactive, and seize opportunities from challenges (Seville et al. 2015, Chu 2015).

Following the proactive definition, (see Hamel and Valikangas 2003, Fiksel 2006, Bhamra et al. 2011) firm resilience in this study refers to the ability to perform well, adapt and even develop new capabilities within changing environments. Resilience is then about continuously anticipating, adapting, and thriving in the face of multiple disruptions, and improving the capability to change before the case for change becomes desperately apparent (Manfield and

Newey 2017). Based on an extensive literature review performed (See Table 2.3) and the above reasoning, the following definition for SME resilience created:

“the SME’s adaptability to disruptions, growth (positive performance), and their ability to seize the business opportunity amid a challenging business environment”.

The proposed core capabilities (i.e., adaptability, growth, and seizing opportunities) also encompass both operational and dynamic peculiarities of the concept. It also captures the firm’s proactiveness to future challenges and disruptions. To be resilient, SMEs require the development of these capabilities to a higher level in the present day's unfolding and complex business environments.

Resilience measurement in an SME context

Despite a call for resilience measurement (Linnenluecke 2017), the present study found no research which developed a robust organizational resilience measurement. The fragmented array of definitions of the concept in general, perhaps explains why no agreement is achieved on how to measure resilience in the SME context (Ortiz-de-Mandojana and Bansal 2016). In recent times, a few attempts were made to develop organizational resilience measures (e.g., Akgün and Keskin 2014, Pettit et al. 2013, McManus et al. 2007). However, most of them were case-based, and none of them has validated the measurement for SMEs and developing countries. The importance of having SMEs focused resilience measures in developing countries follows Sullivan-Taylor and Branicki (2011) and Linnenluecke (2017) suggestion. They state that researchers should be cautious when adopting a measure based on a case focusing on large organizations in the developed world, to SME and other settings such as developing countries. The likely exclusion of relevant features from resilience measures that are constructed in the developed world context may result in distorted research results when used in another context (Abdullah et al. 2013). This issue of not matching the measurement of resilience to its context is closely related to methodological concerns (see Linnenluecke 2017) about the instrument applied to measure SME resilience.

Resilience measurement is partly challenged by the latency of the concept (Ortiz-de-Mandojana and Bansal 2016). Latency refers to the concept’s abstractness and not being directly observable (Biggs et al. 2015). This nature triggers longitudinal assessments, e.g. to study firm performance volatility reports over time, and not only financial performance appraisal on its own (Ortiz-de-Mandojana and Bansal 2016). Given these challenges and the infancy stage of resilience

research in the business domain, the concept has been assessed with measures developed by scholars from different fields of study that vary in focus. Prior research attempted to measure individual resilience, usually from the psychological point of view not at the firm level (Linnenluecke, 2017). They adopted items measuring individual or employee characteristics (Akgün and Keskin 2014), ecological disaster, and community crisis (McManus et al. 2007, Kantur and Say 2015, Biggs 2011) to organizational resilience measurement studies. Somers (2009), using items adapted from psychology, attempts to develop an organizational resilience scale. Other studies developed organizational resilience scales, deriving items from disasters and crisis-related literature. For example, McManus et al. (2007) proposed a framework with which organizational resilience can be measured as an organization's overall situation awareness, management of vulnerabilities, and adaptive capacity to environmental disaster. Biggs (2011) also attempts to measure tourism-sector enterprise resilience, within a context of natural hazards, with items reflecting their adaptive and endurance capabilities and enterprise practices used to minimize their vulnerabilities, using survey data gathered from Thailand and Australia.

However, these studies have some weaknesses. Disciplines in focus vary in relation to resilience meanings. For instance, in psychology (Bhamra et al. 2011) the focus is on the capability to mitigate individual mental shocks which ecologist terms as adaptability, and in engineering as a capability of a structure to absorb shocks while at the same time retaining its functions (Akgün and Keskin 2014). Nevertheless, in business besides adaptive capability attributes, resilience describes the firm's capability to maintain positive performance and to seize business opportunities amid disruptions. Another drawback of these studies, including Biggs's work, is that all of them have associated measurement research to the discrete nature of disruptions (Kamalahmadi and Parast 2016). No research yet has associated resilience measurement to persistently turbulent, resource-scarce business environment; a type of the business circumstances observed in developing countries. In this setting, the nature of disruptions in a practical sense is recurrent and more complex.

This part of the review concludes that due to a lack of consensus on resilience definitions combined with diverse nature of disruptions and vulnerabilities that SMEs face (Tognazzo et al. 2016), a widely adopted measurement instrument has not yet emerged.

Research Methods Applied in Prior SMEs resilience literature

We reviewed the literature based on research methods used to explore resilience in the SME context (see Figure 2.4). A variety of methods is used to study the resilience of SMEs. Our

analysis found that most of them are theoretical and case studies. This might be due to a lack of consensus on what resilience in the SME context is and how we measure this capability (Tognazzo et al. 2016). We also found no study applying the method of a literature review to structure the divergent views of the concept in the area of SME resilience and DCs. According to this part of the review, theory building is the leading research focus within the area of the resilience of SMEs at this stage of the developing research. Thus, there seems to be little knowledge of how companies overcome difficulties on the ground (Linnenluecke 2017). For resilience theory to take a central point in the SME field of research (Williams and Vorley 2017), besides theory building, more empirical oriented studies need to be undertaken in the future.

As we looked at the sparse empirical studies, a small number of researches have applied the survey-based method in comparison to the conceptual and case study approach. A case study is an often-used method in the area. Although research based on case study method boosts our more in-depth understanding of the topic in different contexts, they have a limitation as the insights generated using such kind of method may not be generalized and applicable beyond the context of the studies (Chan 2011, Bhamra et al. 2011). Meaning, the knowledge thus far based on case-study lacks transferability across different contexts (Linnenluecke 2017), restricting policymakers’ action on how to build sustainable SMEs. Hence, Bhamra et al. (2011) call to more support policymakers’ decision on SMEs development, demands future studies to apply more a survey-based approach for their resilience investigation.

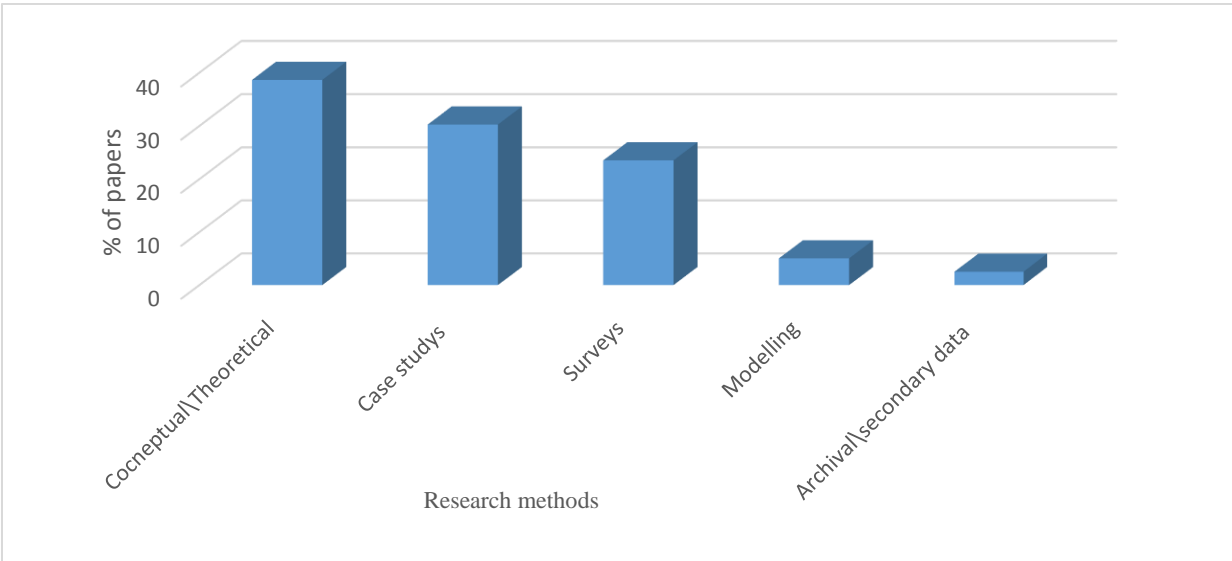


Figure 2.4: Distribution of publications based on research methods used

The longitudinal approach is a theme in this review as it is relevant to describe why seemingly successful business in a particular year failed or became unsuccessful in the following years (Ortiz-de-Mandojana and Bansal 2016). Building resilience capabilities by SME is a continuous task (Ortiz-de-Mandojana and Bansal 2016). Being resilient is a dynamic capacity that develops over time, rather than a static attribute that organizations do or do not possess. As disruptive situations are dynamic, changing over time, companies need to build a vibrant capacity to cope with changing challenges (Ates and Bititci 2011). Based on this notion, we were interested in this longitudinal perspective and thus reviewed the collected publications to know to what extent they have addressed dynamism (see below Figure 2.5).

The total number of empirical papers (combined survey and case study-based methods) was 66 papers. Out of these 66 papers, only 4 articles (6 %) (Sköld and Tillmar 2015, Ortiz-de-Mandojana and Bansal 2016, Williams et al. 2017, Torres et al. 2018) applied a longitudinal research design by relying on secondary data of firm performance over the years (see Figure 2.5). Most of them applied the cross-sectional design (62 papers, 94%). The findings indicate that from existing literature we have limited knowledge about the company’s resilience over time and resilience dynamism.

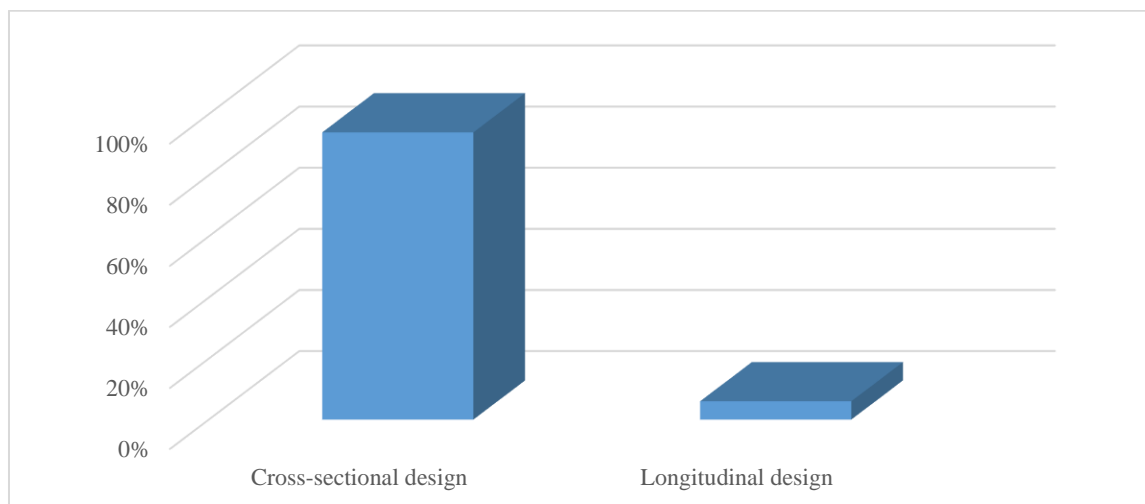


Figure 2.5: Distribution of publications-cross-sectional vs longitudinal research design

Review of Factors Influencing SMEs Resilience

Various factors may influence the development of resilience of SMEs, yet research results are largely inconclusive. Looking at the case study of an SME, Demmer et al. (2011) suggest that factors influencing the resilience of large corporations could also be applied to SMEs. Pal et al. (2014) who conducted study on Swedish textile and clothing SMEs identified several key

enablers of resilience, divided into three broad assets: resourcefulness (material resources, financial resources, social resources, network resources, intangible resources), competitiveness (flexibility, redundancy of resources, robustness, networking), and learning and culture (leadership and top-management rapid decision-making, collectiveness and sense-making, employees wellbeing). Others argued that having these assets is a necessary condition, but not sufficient to bolster firm resilience because to create resilient firms a capability to orchestrate these assets is imperative. Our analysis has found that researchers have discussed several but a fragmented bundle of key enablers, conditions, and organizational forms, etc., that influence the degree of firm resilience. We categorized, in general, those diverse factors into entrepreneurial, firm internal resources, external environment, and their interactions, as key clusters (as shown in Table 2.4). Next, we presented a detailed analysis of these key clusters that influence creating resilience in an SME context.

Table 2.4: Key factors that influence SMEs resilience

Key clusters	Corresponding authors
Entrepreneurial characteristics: Enterprise's owner background (such as age, gender & lifestyles, etc.) Human capital (HC), Entrepreneurial orientation (EO), and Social capital (SC)	(Wedawatta and Ingirige 2016, Sun 2011, Steiner and Cleary 2014, Sköld and Tillmar 2015, Richtnér and Löfsten 2014, Pettit et al. 2013, Pal et al. 2014, Gunasekaran et al. 2011, Dumitraşcu and Dumitraşcu 2016, Dillard et al. 2010, Demmer et al. 2011, Dahlberg and Guay 2015, Crick and Crick 2016, Chiesi 2014, Bullough and Renko 2013, Branzei and Abdelnour 2010, Biggs et al. 2012b, Biggs et al. 2012a, Biggs 2011, Biggs et al. 2015, Bernard and Barbosa 2016, Ates and Bititci 2011, Alonso and Bressan 2015, Adnan et al. 2016, Acquaah et al. 2011, Alberti et al. 2018, Branicki et al. 2018, Danes et al. 2009, Hedner et al. 2011, Littlewood and Holt 2018, Mzid et al. 2018, Tengblad and Oudhuis 2018, Tengblad 2018, Torres et al. 2018)
Firm characteristics: Financial capital, size, business age, and types	(Winnard et al. 2014, Wedawatta and Ingirige 2016, Tognazzo et al. 2016, Thomas et al. 2015, Sun 2011, Sullivan-Taylor and Branicki 2011, Smallbone et al. 2012, Sabatino 2016, Pal et al. 2014, Pal et al. 2012, Ortiz-de-Mandojana and Bansal 2016, Menéndez Blanco and Montes Botella 2016, Lengnick-Hall et al. 2011, Lampel et al. 2014, Demmer et al. 2011, Crick and Crick 2016, Conz et al. 2017, Carvalho et al. 2016, Biggs et al. 2012b, Biggs et al. 2012a, Biggs et al. 2015, Bernard and Barbosa 2016, Akgün and Keskin 2014, Acquaah et al. 2011, Alberti et al. 2018, Ali et al. 2017, Branicki et al. 2018, Danes et al. 2009, Doeksen and Symes 2015, Duchek 2014, Hedner et al. 2011, Littlewood and Holt 2018, Mzid et al. 2018, Tajuddin et al. 2017, Tengblad and Oudhuis 2018, Tengblad 2018)
Business environments: Socio-cultures, institutions, macro-economic conditions, location & infrastructures.	(Steiner and Cleary 2014, Smallbone et al. 2012, Dillard et al. 2010, Branzei and Abdelnour 2010, Biggs et al. 2012b, Biggs et al. 2012a, Biggs 2011, Biggs et al. 2015, Alonso and Bressan 2015, Akgün and Keskin 2014, Adnan et al. 2016, Alberti et al. 2018, Ali et al. 2017)
Interaction/Interplay effects	(Tognazzo et al. 2016, Akgün and Keskin 2014)

Analysis of key factors influencing the Business Resilience of SMEs

Entrepreneurial factors. The entrepreneurial cluster includes an enterprise's owner background, human capital, entrepreneurial orientation, and social capital.

Enterprise owner's background. This category includes age, gender, and lifestyles of entrepreneurs (Sköld and Tillmar 2015, Biggs et al. 2012a). Biggs et al. (2012a) study, for example, found that the age of entrepreneurs and lifestyles influence the companies business resilience level. Similarly, Sköld and Tillmar (2015) studied the role of gender in entrepreneurial development and found that the number of women-owned businesses is on the rise despite being faced with disruptions. Hitherto, scant research exists which empirically investigates the variance of resilience due to gender differences in developing countries, i.e., a more vulnerable setting for women-owned SMEs.

Entrepreneur's human capital (HC). Most of the publications recognize the crucial role that human resources play in the resilience of SMEs to disruptions. Having requisite skills and experience was highlighted as a critical contributor to enterprise resilience development (Biggs et al. 2015). These factors are believed to improve the entrepreneur's management efficiency in the face of disruptions (Pal et al. 2014). In the case of a profitable opportunity, an entrepreneur with higher managerial ability has a higher chance to exploit this and subsequently ensure business success (Davidsson and Honig 2003). A better-managed company scores a higher business performance (Page and Söderbom 2015). Likewise, in enterprises that had a high level of employee participation, firm resilience scored high despite the existence of chaotic situations (Lampel et al. 2014). However, evidence about the effect of an entrepreneur's HC on business success is not conclusive yet. Although Biggs et al. (2015) found a positive relationship between enterprise owners' HC and their enterprise resilience, Nichter and Goldmark (2009) questioned the HC effect on a company's performance.

Entrepreneurial orientation (EO). Ates and Bititci (2011) discuss the importance of EO in the process of building a resilient SME. EO represents the strategic aspects of entrepreneurship including entrepreneurial behaviours, practices, strategies, decision-making styles, actions taken by entrepreneurs in managing companies (Lumpkin and Dess 1996, Wiklund et al. 2009). Wiklund et al. (2009) noted that the EO dimensions, consisting of being innovative, proactive, and risk-taking, play a crucial role in business success. Some other authors (e.g., Wales et al. 2013, Lumpkin and Dess 1996), however, have questioned Wiklund's findings. These researches argued that it is not only EO but also the environment in which business is run which influences the relation between EO and firm success. Wales et al. (2013), based on their review of EO literature, and concluded that the EO relation with business success needs more testing in various contexts. They noted that most of EO research thus far concentrated on developed

countries and thus limited work exists in developing countries. Indeed, this indicates the need for more evidence about the role of EO in SMEs' resilience development in different environments including in resource-scarce and demanding business circumstances, i.e., in developing countries.

Social capital (SC). How well firms establish and leverage networks to determine the extent to which they are resilient to disruptions and challenges (Torres et al. 2018). SC, or social network, comprises a relationship of entrepreneurs with other persons, groups, or institutions (Chiesi 2014). These networks are mostly built based on trustworthiness, reciprocity, and shared norms (Nichter and Goldmark 2009). Some studies have recognized that social networks provide a buffer for SMEs in the face of adversity (Gunasekaran et al. 2011, Biggs et al. 2015). They also offer avenues for increased mobilization and transfer of knowledge, dissemination of innovative activities, which in turn increase the resilience of companies (Demmer et al. 2011). Collaboration with government organizations in a networked environment also expands resources that can be drawn on, learned from, and its capacity to respond to challenges (Pal et al. 2014, Chiesi 2014). Chiesi (2014) examined the role of SC on the resilience of immigrant entrepreneurs in Italy and found that organizations that strategically collaborate with different typologies of social networks were able to mobilize more credit, which was crucial for business resilience during the economic crisis starting in 2008/09.

Firm internal factors. Firm internal attributes are consisting of a company's physical and financial capital matter for resilience (Wedawatta et al. 2010). The ability of SMEs to access finance is important for resilience, although this can be problematic for SMEs in general and subsistent firms operating in DCs in particular, experiencing difficulties securing external finance (Tognazzo et al. 2016). Tognazzo et al. (2016) note a tendency for SMEs of larger size, slack resources and with good access to finance, to be most resilient in the face of economic downturns. In the same way, McGuinness and Johnson (2014) suggest that the financial position of an SME in the run-up to an economic downturn is more important than age or size of the company in determining the impact of the crisis on the company. They find that in times of economic downturn, financially vulnerable SMEs tend to turn increasingly to trade credit as a substitute for bank finance, to keep their businesses going.

Due to collateral related problems, most SME in many countries failed to get access to credit services (Tognazzo et al. 2016). Lack of access to credit is reported as a significant obstacle for business growth (Biggs et al., 2015) and that the financial situation is tough for SMEs operating

in DCs (Nichter and Goldmark 2009). Bekele and Worku (2008a) study found that in DCs context, most SMEs rely on personal, families, and friends support. The study shows that 61% of SMEs failure is attributable to a lack of access to finance. Nevertheless, according to Page and Söderbom (2015) access to finance alone might not boost firm resilience. This overview illustrates the ongoing and inconclusive debate in the literature, concerning the role of financial capital resources for firm resilience. Research from Sullivan-Taylor and Branicki (2011) studied the impact of the sector, geographic location and industry upon organizational resilience and found that small firms can have an advantage over larger firms since they usually have less bureaucracy, the possibility of rapid decision making and rapid communication, as well as shorter processes. The vulnerabilities of enterprises also may vary by type of sectors. For example, Wedawatta et al. (2010) suggest, compared to other sectors in the UK, that the construction sector SMEs are more vulnerable to natural hazard disruptions.

Business Environment factors. Business environment, broadly, includes socio-economic, cultural, and political conditions (Wedawatta and Ingirige 2016). The business environment can be favorable for firm resilience or not favorable, disruptive as well (Adnan et al. 2016). For example, favorable macroeconomic and conducive regulations pave opportunities for company growth (Ates and Bititci 2011). The unfavorable and hostile business environment is filled with complex and unfolding disruptions including infrastructural related hurdles, institutional voids, restrictive regulatory systems, limited access to markets, and technologies that stifle business growth (Tengeh 2016). Persistent political turmoil, conflicts, drought, and uncertainty of government policies represent other threats (Sabatino 2016, Branzei and Abdelnour 2010). According to Tengeh (2016), the developing countries business environment, which is characterized by more hostile and unfolding disruptions, make SMEs more vulnerable to failures than those in developed regions. This type of environment is labelled as persistently turbulent, disruptive, vulnerable, resource-scarce business environments. Surprisingly, in amidst of a such seemingly vulnerable contexts, some SMEs are growing fast and are even thriving (Tengeh 2016).

Interaction effects. The need to examine the interaction effects of various factors and resources for enhancing firm resilience is increasingly called for (Tognazzo et al. 2016, Lengnick-Hall et al. 2011). Based on this call we scrutinized the existing literature. We found that studies examining the interaction effects of various factors on the resilience of SMEs are rare in general. This finding implies that limited studies have explored the interaction effects (Gunasekaran et

al. 2011) of different factors for the resilience of SMEs. The lack of research focus on this area renders a fragmented answer to the question of what drives SME resilience (Dahles and Susilowati 2015). Research analyzing the interaction effects was pioneered by Lumpkin and Dess (1996), assessing the interplay of EO and other factors such as companies size. Following Lumpkin and Dess (1996), several researchers have examined EO interaction with other various resources of companies and their effects on business success (Stam and Elfring 2008, Rauch et al. 2009). While EO is can influence a firm’s business success directly, other resources boost the relationship between EO-business successes (Wales et al. 2013) indirectly. Since SMEs which are performing well due to interaction effects of certain resources in a given context might not be resilient in other contexts, Chu (2015) highlights the need to research interaction effects.

A review of theories underpinning prior research

Tukamuhabwa et al. (2015) suggested that adopting established theory facilitates and improves our understanding of resilience. Established theories, after all, support the formulation of the relationship between variables and they also enable comparison between research results undertaken in different contexts (Foy et al. 2011). Following this argument, we studied and scrutinized theories underpinning the relationship between firm resilience and its influencing factors in past research (see Table 2.5).

The displayed results indicate that the crisis and disaster management, the resource-based view (RBV), dynamic capabilities, sustainability, and system theories were often applied to explain an association of factors influencing resilience. Specifically, among others, theories related to crisis and disaster management have been found in highly referenced in the studied articles. This result is consistent with Kantur and Say (2015), stating that crisis and disaster theories (often focused on discrete situations) have dominated the organizational resilience research in the business and management stream. Unlike Kantur and Say (2015), Tukamuhabwa et al. (2015) based on the review of supply chain resilience literature, found RBV the most applied theory in literature.

Table 2.5: Summary of some of the theories used in prior SMEs studies

Theories		Corresponding authors
Crisis/Disaster management	/Risk	(Wedawatta et al. 2010, Wedawatta and Ingirige 2016, Thomas et al. 2015, Tengeh 2016, Akgün and Keskin 2014, Orchiston et al. 2016, Lee et al. 2013, Irvine and Anderson 2004, Huggins and Thompson 2015, Gomes 2015, Doern 2016, Dahles and Susilowati 2015, Clarke 2008, Branzei and Abdelnour 2010, Halkos et al. 2018, Harries et al. 2018, Marković 2018, Mendoza et al. 2018, Pascua and Chang-Richards

	2018, Parker and Ameen 2018, Sahebjamnia et al. 2018, Tibay et al. 2018, Torres et al. 2018)
Resource Based View (RBV)	(Winnard et al. 2014, Tognazzo et al. 2016, Sun 2011, Lengnick-Hall et al. 2011, Alberti et al. 2018, Branicki et al. 2018, Conz et al. 2017, Danes et al. 2009, Hedner et al. 2011, Tengblad 2018, Pal et al. 2014, Pal et al. 2012)
Dynamic Capabilities (DCA)	(Conz et al. 2017, Alonso and Bressan 2015, Akgün and Keskin 2014, Acquaah et al. 2011, Duchek 2014, Manfield and Newey 2017, Chiesi 2014)
RBV/DCA/Social capital(SC)	(Pal et al. 2014, Pal et al. 2012, Torres et al. 2018)
Systems theory	(Burnard and Bhamra 2011, Sabatino 2016, Pettit et al. 2013, Erol et al. 2010, Chan 2011)
Sustainability theory/Family Business sustainability theory	(Thomas et al. 2015, Ortiz-de-Mandojana and Bansal 2016, Dillard et al. 2010, Danes et al. 2009, Lv et al. 2018, Mzid et al. 2018)
Fuzzy sets theory	(Cheese and Cheese 2016, Arsovski et al. 2015, Aleksić et al. 2013)
Business continuity	(Sullivan-Taylor and Branicki 2011, Dahlberg and Guay 2015, Sahebjamnia et al. 2018)
Institutional	(Smallbone et al. 2012, Castellacci 2015)

We conclude that out of the 118 articles reviewed in this study, a significant number of papers (see figure 2. 6) did not explicitly specify theories adopted to underpin relationship of business resilience and its influencing factors in their research.

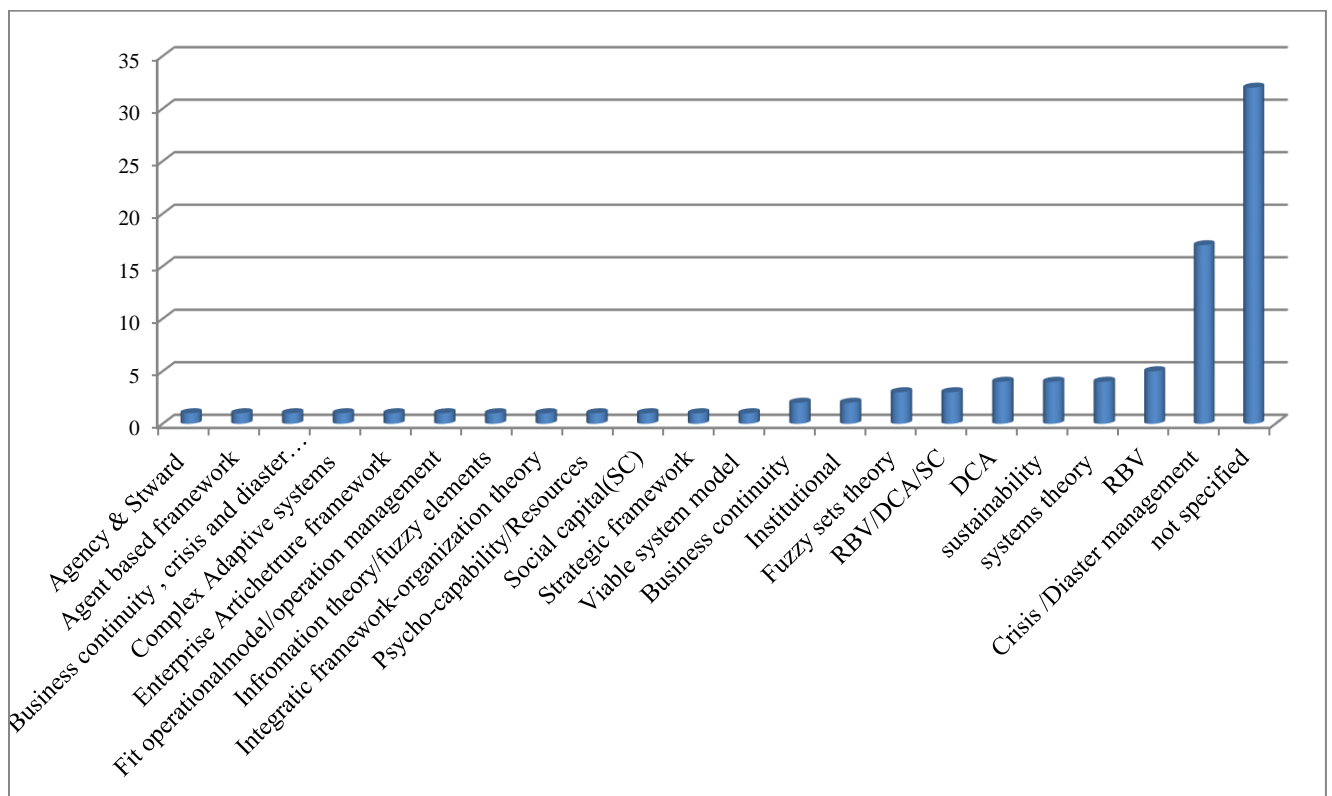


Figure 2.6: Theories underpinning prior resilience research¹²

¹² Note: RBV=Resource Based View, DCA=Dynamic Capability, and SC=Social Capital. Not specified refers those researchers that did not clearly mentioned the theory adopted for their research.

From a general management perspective, RBV is identified as relatively the other frequently used theory to frame the resilience studies in past research.

2.4 Discussion and conclusions

Overviewing this literature overview a justified conclusion is that the academic attention for the SME resilience publications is on the rise specifically post 2008/09 global financial crisis (see figures 2.2 and 2.6). Some researchers argued that the crisis caused a tumbling effect on many SMEs (Sullivan-Taylor and Branicki 2011, Pal et al. 2014), and for that reason, several scholars were attracted to study the concept. Surprisingly, despite the crisis effect, some companies were able to survive, grow and even thrive at the time. Why some SMEs performed well during that crisis whereas others failed, has become a key issue in academic communities. Moreover, the threats faced by SMEs are not limited to the financial collapse of 2008/09. Rather threats are numerous and varied, and also have been increasing, indicating the desirability of researching SMEs resilience (Annarelli and Nonino 2016). We observed the variety of threats that triggered resilience research in an SME context including institutional failures, political instability, conflicts, natural disasters, extreme weather events, and challenges related to infrastructure, and market and input access related obstacles (Littlewood and Holt 2018), among the few to list. From this list of threats and subsequently the importance to have insight into developing and maintaining resilience, one can derive that it is not only of interest for academia but as well for entrepreneurs and policymakers to research SME resilience (see Nybakk et al. 2011, Boter and Lundström 2005, Blackburn et al. 2013).

However, the focus of literature up to now mainly is on how to maintain companies resilience in light of these discrete/event-based disruptions and what factors drive them to return to a stable state (See as well Bhamra et al. 2011). This even though business environments, especially in DCs, are more vulnerable and hostile for entrepreneurs due to the existence of recurrent and multifaceted disruptions (Linnenluecke 2017). Of course, some of the disruptions hampering the resilience of SMEs that includes environmental jolts (Akgün and Keskin 2014), extreme events (Sullivan-Taylor and Branicki 2011), and financial crises (Pal et al. 2014) can be labelled as discrete because they occur once in a time. However, Tenge (2016) also alerted that researching resilience about specific crises has limited the application of the concept to another context such as in DCs where companies faced recurrent and multifaceted forms of disruptions. Surprisingly, limited research has looked at the resilience of SME in such a context (Sabatino 2016).

This more dynamic view on the reality of resilience should come back in the definition of the concept itself. Ates and Bititci (2011) underpin the necessity to introduce dynamism as they describe; “resilience is the capacity of an organization to survive, adapt and sustain businesses: the term has to show not only firm reactions/responses to specific-short term disruptions but also necessary to predict about sustenance of firm in the long run in the midst of complex turbulences”. Linnenluecke (2017) even states that researching the resilience concept to only specific, discrete disruptions has engulfed the rise of a widely inconsistent definition of the concept in business and management literature. Following this line of resilience seen as recurring disruptions and making the inventory of discussions on definitions and conceptualizations, we conclude (as well) that the concept of resilience is multidimensional and embraces a portfolio of capabilities that firm need to develop to overcome the complex and unfolding disruptions challenging them from the business environment. Hence, the adaptability, development of new capabilities- seizing business opportunities and firm sustenance of positive performance, are the core characteristics describing the resilience of SMEs (Ates and Bititci 2011, Williams et al. 2013). A highly resilient SME maintains positive firm performance, more able to adapt to the environment, and able to seize business opportunities better than less resilient one. This will offer better insight into the practical and theoretical aspect of SMEs resilience in the literature (Linnenluecke 2017).

Better insight via research starts with robust measurement of resilience in which the recurrent disruptive events and SMEs are central. Developing SMEs resilience measurement is prerequisite to exploring factors influencing the resilience of SMEs and how they able to overcome disruptions (Tognazzo et al. 2016). Our review finds that only a few publications discuss organizational resilience measures by focusing on large and mainly they adopted items from crisis and disaster management literature (Kantur and Say 2015). This may be related to the lack of consensus among scholars on the definitions, and the contextual diversity of resilience understandings used by different researchers (Dahles & Susilowati, 2015). The implication of this is that ‘one size cannot fit all’ as stated in the work of (e.g., Sullivan-Taylor and Branicki 2011), resilience differs in size of the companies and to the nature of disruptions (discrete vs recurrent) (Pal et al. 2014, Chiesi 2014, Branzei and Abdelnour 2010, Biggs et al. 2012b). Without considering this contextual variability, adopting a measure used for discrete disruptions and large companies may lead to biased research result when used in an SME context (Linnenluecke, 2017).

Research on SME resilience is on the rise. While we saw more case-based empirical studies, literature is not conclusive. More survey-based research is required to validate the theoretical foundations of resilience measurement for SMEs in DCs. Connected to measurement, methodologically; we also observed a few publications in which a longitudinal research design approach was applied to explore companies' resilience over time. This is believed to be an essential direction for future research, where using a longitudinal design would augment the theory development and testing of resilience in the SME context (Ortiz-de-Mandojana and Bansal 2016). Thus, more research based on a longitudinal design needs to be applied to advance our understanding of the resilience of SMEs over time.

Additionally, to the recurrent nature of disruptions, we also focus specifically on SMEs. To overcome the tough situations in DCs, SMEs require more resilience capacity in response (Dahles and Susilowati 2015). Research on factors influencing the development of SMEs resilience has been the subject of interest among management and strategy scholars. SMEs constitute a substantial proportion of livelihood conditions in many countries in the world (Ates and Bititci 2011), and the academic community needs to provide policymaker and practitioners with knowledge on about factors influencing their resilience development. About this, we find the existing knowledge is fragmented and inclusive. Moreover, there are emerging empirical studies to address the topic, yet most of them (still) are case studies. Thus, we selected evidence-based research information on how organizations like SMEs may achieve higher degrees of resilience (Bhamra et al. 2011). In confirmation of this, also Annarelli and Nonino (2016) and Linnenluecke (2017) in their works, based on a comprehensive literature review, sustain the existence of the same gap. Gunasekaran et al. (2011) highlighted that a number of resources and capabilities are critical for building organizational resilience. Ates and Bititci (2011) reported that resilient building firms require possession of resources and strategies that support effective use of the possessed resources.

Moreover, the subsistent character of SMEs adds to a peculiar position of entrepreneurs in DCs. Related to SMEs' subsistent character, Tanner et al. (2015) asserted that the lens of resilience "requires greater attention to human livelihoods if it is to address the limits of adaptation strategies and the development needs of the planet's most impoverished people in the most vulnerable settings"(pp; 23). As Ortiz-de-Mandojana and Bansal (2016) note, when disruptive conditions rise, the volatility of firm performance is strongly felt. This is a pressing issue especially for those subsistent entrepreneurs in the DCs (Acquaah et al. 2011), whose livelihood

strongly relies on their small businesses. Wright et al. (2005) offer further inspiration for studying SMEs in DCs by emphasizing that, “for the same reason that strategy practice in DCs pushes the frontier in strategic thinking, strategy research with a focus on these DCs, both as an opportunity and as a necessity, is challenging conventional wisdom in academic thinking and theories in significant ways.” (Peng 2005, p 27). Along the lines of Linnenluecke (2017), we conclude that the DC setting provides a potential area of research on SMEs resilience. Despite the academic challenge and practical implications for researching SME resilience in DCs, we concluded that in business administration, studies of resilience have focused on organizations in developed economies. Researchers in the developed world (mainly in the US and Europe) have conducted considerable studies on SMEs resilience, though the topic is a concern in DCs too. Therefore, a gap exists in literature in our understanding of the resilience of SMEs acting in developing countries.

From the literature review specifically on the theories used in resilience research, we concluded that the RBV is the relatively most frequent used general management theory. Tognazzo et al. (2016) suggested that RBV is the most appropriate theory in framing the study of SMEs than that of large companies. In entrepreneurship research, RBV theory has dominated literature over the last decades (Alberti et al. 2018, Abylaev et al. 2014). According to proponents of the RBV, possessing unique, rare and inimitable resources is desirable to advance companies’ competitive advantage and thus resilience especially in resource-scarce environments (Acquaah et al. 2011). Possessing resources with such attributes can assist SMEs to survive when a disruption happens (Lengnick-Hall et al. 2011). Yet, RBV has its limitations; for example, it does not entail how resources are processed and the role of firm owners in converting resources to values (Sirmon et al. 2011). To overcome this limitation of RBV, scholars (e.g., Sirmon et al. 2011, Hitt et al. 2011) suggested the importance of extending RBV to the resource orchestration theory (ROT) as this theory enhances capturing knowledge on how to build strategic and resilient entrepreneurship (Hitt et al. 2011). We argue in this paper, that ROT is especially crucial for understanding SMEs resilience enacted in a very complex, and recurrently turbulent environment such as in the DCs (Littlewood and Holt 2018), where scarcity of resource creates immense challenges for their functioning (Alberti et al. 2018). Overseeing SME resilience literature, we noted that no research has yet employed the ROT for SMEs resilience analysis, providing a gap for future research.

In ROT, the manager/owner of an SME is central due to his role in orchestrating the resources to obtain a certain performance. Annarelli and Nonino (2016) presented an argument to underpin the importance of the manager's role in coping with resilience. They state that an organization's resilience to disruptions is no longer a simple trade-off between redundancy and flexibility but needs to be connected as well to strategic determination and actions for maintaining a competitive advantage. This ignites the role of entrepreneurial orientation (Miao et al. 2017) in enacting the management of scarce resources available to firms and thus achieve business resilience in challenging conditions (Alberti et al. 2018). Acquaah et al. (2011) also support this idea by stating that creating a resilient organization requires strategic actions that change the way a company operates and that increases its competitiveness. Pal et al. (2014) research found that SMEs may be able to enhance their resilience notably by focusing on access to finance, material assets, networking, and strategic & operational flexibility and through 'turning them to strategic capabilities' (pp; 421). SME owners also have to adopt strategies making them more resilient, for example, resource configuration, experimenting and developing slack in resources (Tognazzo et al. 2016). SMEs own an unique character differentiating from large companies about resilience (Sullivan-Taylor and Branicki 2011). Indeed, adopting a contextual strategy, which is unique to SMEs that may work to their advantage in developing resilience, is required. To be able to answer the question of what makes SMEs more resilient from a holistic perspective (Annarelli and Nonino 2016), an investigation into these factors and their strategic utilization on building firm resilience is desirable.

Conclusions

In summary, in this chapter, we answered the call for studies into the resilience of small and medium enterprises (SMEs) by Annarelli and Nonino (2016)- by structuring the diverging views in the literature and laying the foundations of future study in the field. Using a well-defined methodological approach, we studied existing literature on the resilience of SME published in a widespread set of journals from 2000 to 2018. We hope that the findings of this review have aroused several new points by drawing together many independent studies. This study contributes to the theoretical debate on exploring resilience definitions, measures in SMEs and factors influencing the resilience. Prior studies on resilience influencing factors have provided disjointed and incoherent results. We categorized diverse factors discussed and summarized them in this study, into entrepreneurial, firm, environmental, and interaction effects. Generally, the present research has highlighted several and wide-ranging fertile issues discussed in the existing literature related to SMEs resilience. We do not expect our study to be

taken as a final word on SMEs resilience-related research. Instead, we present overall research endeavours to highlight the accumulative achievements of the existing resilience research on SME to stimulate more studies on the subject.

Research implications and future research directions

Empirical research on resilience is needed

Small and medium enterprises (SMEs) play a focal role in many countries' economies, despite facing growing and complex disruptions from the business environment. Knowledge of their resilience is becoming a focal issue to leverage an endeavoured contribution of these companies for economies of the countries (Alberti et al. 2018). Resilience is such a capability that business organizations should have in order to face the growing complex challenges (Kantur and Say 2015). Although the concept of resilience has often been used in general management, and small and medium enterprises (SMEs) studies, understanding of the concept is very much fragmented, and limited work is done on validation of the concept on the ground.

Resilience research based on a uniform, multi-dimensional definition

The term resilience is defined differently depending on the field of study and the nature of disruptions. Resilience, generally, in the business domain addresses different managerial constructs including performance. It is a multidimensional concept that can be described by various firm's capabilities attributes. Besides adaptability and performance attributes, which often cited in organizations resilience studies, this study highlighted the need to incorporate, the often discussed but neglected aspect in defining business resilience -“the capability to seize business opportunities”-as a salient feature of resilience in an SME context. The notion of the capability to seize the opportunity is that the challenging settings not only hold difficulties but also have potential opportunities that need to be discovered, exploited and seized by business companies (Lengnick-Hall et al. 2011). Therefore, the adaptability, performance, and seizing business opportunities are salient characters in defining the resilience of SMEs. Also, these characters provide a fundamental direction to contextualize the resilience theory to the general entrepreneurship and SMEs field. Future research on SMEs resilience thus should focus on key topics such as measurement of SMEs resilience, key resources, processes, and actions driving SMEs resilience from an agreed upon resilience definition. Then future research on SMEs resilience needs to pay more attention to theory testing and strategic approaches to develop resilient SMEs, to build more consistently a body of knowledge.

The theoretical and practical urgency to take into account SMEs

As noted earlier, business resilience research to date has tended to adopt a large organization focus and has assumed that findings are likely to apply to the SME context (Ates and Bititci 2011). Resilience research with an overtly SME focus is recent however considerably rising in recent years. There is still great potential for more research. Studies existing more of conceptual and mainly empirical research on the resilience of SMEs is lacking. This is surprising both because the recent crisis has been a test for survival for companies (much more for the more vulnerable SMEs) and because of the paramount relevance of smaller companies in economies.

Furthermore, in the past research, much weight is given to organization resilience in light of the discrete nature of disruptions in the developed world. Limited work has been done to know about the company's resilience in the face of numerous and recurrent challenges observed in DCs; an acknowledged extremely vulnerable setting to run a business on an SME scale. The resource constraints of the setting also have intensified many SMEs to be more exposed to disruptions (Page and Söderbom 2015). Evidence supports that while some SMEs are quite resilient within the setting (Branzei and Abdelnour 2010), most of them operate under survival level and often fail. DCs and SMEs operation in such a setting provides an interesting setting for firm resilience research. After all, the more firms have faced disruptions; the more resilience is required to survive and operate the business (Tengeh 2016). Future research on the resilience of SMEs in such a setting may help to improve the global quest for resilience knowledge that looked for by academician and policymakers as well.

Listing of identified research gaps

Taken together with the points mentioned above, this chapter has put forward the following specific research gaps that need attention in future studies:

- Future research has to give due consideration to SME focused resilience research. Specifically, that will utilize a survey-based method, to provide more generalizable empirical evidence. This will help to create more clarity on blurred issues such as the concept definition and its contextual understanding;
- We call for using uniformly one multidimensional definition of the SMEs resilience concept;
- We call for further research that develops a robust resilience measurement in SMEs. Combined with this the establishment of, and the debate on the robustness of various approaches used to measure resilience in the SMEs field are also critical;

- A very limited body of work has considered the practical interventions, which may enhance the resilience of SMEs principally in an extremely vulnerable setting such as in the DCs. Future research in such context, for instance, has to assess the relevance of different factors such as entrepreneurial orientation (EO), human capital, physical capital and social capital for the development of SMEs resilience. We expect the identification and exploration of the significance of various resources and management of these resources are of importance to future research aimed at explaining the success and failure of SMEs in DCs;
- We call for more research that provides a better understanding of theories underpinning the relationship between the resilience and its influencing factors. Specifically, research on the resource-based view (RBV), and it is an extended idea- resource orchestration theory for the strategic building of firm resilience in resource-scarce and vulnerable setting and,
- The current research commonly connected resilience thoughts to specific shocks or discrete disruptions. Moreover, there is a need for the establishment of the SMEs resilience debate considering the developed world and DCs, relatively in multi-faced and complex nature of disruptions, which is a practical phenomenon of business setting seen in many DCs.

Limitations

This study is not without limitations, which are linked with the methodology used. First, our review focused on resilience studies on SME. Consequently, our research excluded research on larger organizations and as well those papers conceptualizing resilience from a psychological perspective (as our focus is on firm-level) that may apply to SME context too. Second, despite our great efforts, the literature search may have failed to capture all relevant SME resilience insights. In particular, we excluded contributions such as conference papers. Third, despite every precaution taken, the researchers recognize their subjectivity regarding the categorization of papers. Fourth, while we executed all efforts to be comprehensive in collecting the sample of SME focused resilience publications for this study, we may have unintentionally overlooked pertinent articles. This is likely when papers were not published in journals that do not participate in the databases we explored. Fifth, the application of citation and reference checks searching approach that we use to supplement the main search steps may induce some bias, for example, *Ismail et al. (2011)* and *Hedner et al. (2011)*.

Chapter 3

Robust Business Resilience Measurement of SMEs in Turbulent, Resource-Scarce Business Environments

Abstract

Although academic interest in business resilience has steadily grown in recent years, a robust scale to measure the resilience of Small and Medium Enterprises (SMEs) largely remained a “black box”. A robust resilience scale is a prerequisite to generate reliable information on how to foster viable SMEs. In this study, a robust measurement scale is developed on the bases of a self-composed definition of resilience. This scale is tested in a resilience-challenging environment constituted by SMEs which act in a persistently turbulent and resource scarcity business challenges. Such environments stand for a continuous threat of turbulences which can be witnessed in many developing countries (DCs). Moreover, SMEs represent an economically vulnerable group of companies to cope with such an environment. This combination of SMEs and vulnerable business context is an under-researched phenomenon. By positioning this resilience measurement research in Ethiopia’s challenging environment, we fill gaps in the resilience context literature, but as well learn fundamentally about the essence of the concept of resilience. The definition of resilience, grounded in a systematic literature review, contains the dimensions: firm capabilities to maintain positive performance (growth), adaptability, and seizing business opportunities amid tough situations. The study used a survey of 408 SMEs owner-entrepreneurs from Ethiopia, to validate these dimensions. A confirmatory factor analysis (CFA) and invariance test (such as across genders of entrepreneurs), were deployed. Results indicate that the construct resilience in the SME context is in practice multidimensional, comprising the three already mentioned dimensions. We also confirmed the equivalence of the scale across the gender of entrepreneurs. Researchers and organizations that aim to support SMEs can use the scale to evaluate the resilience of SMEs in vulnerable contexts.

Keywords: Robust resilience measure, SMEs, vulnerable setting, developing countries

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3.1 Introduction

Appreciating the growing importance of SMEs resilience especially in developing countries (DCs), the lack of an instrument measuring their resilience hinders the progress of empirical analysis on the topic in such context (Korber and McNaughton 2017). Linnenluecke (2017) and Akgün and Keskin (2014), called for the development of a robust resilience measurement for companies. The literature lacks consensus on resilience definitions and its measurement (Williams and Vorley 2017) let alone on the robustness of resilience measurement. Insights from the academia regarding SMEs resilience generally remain more of a theoretical nature and are mainly methodologically limited to case-based studies (Kantur and Say 2015). Although a few studies have attempted to develop organization related resilience measures (McManus et al. 2007, Pettit et al. 2013, Akgün and Keskin 2014), these attempts are exploratory, and most of them are related to large companies. According to Williams and Vorley (2017), developing the robust resilience measure in the SME context is requisite to guiding researchers to generate reliable insights. Robustness of measurement means instrument validation using a combination of techniques including equivalence (invariance) test when developing the scale (see in Nam et al. 2016). The issue of invariance is concerned with the fundamental question of comparability of a scale within groups as used in different researches (Wach et al. 2016). If researchers investigate resilience and (implicitly) conclude the resilience of companies in different circumstances, the assumption is that resilience is equivalently measured. If not equivalently measured, the conclusions on the resilience of companies can be the result of the characteristics of the different scales used (Nam et al. 2016, Wach et al. 2016).

Establishing a robust and invariance measure starts by defining the concept (El-Adly et al. 2017). Manfield and Newey (2015) suggested that in entrepreneurship the term resilience holds a portfolio of capabilities. Following this suggestion and a comprehensive review of resilience literature in SME context (see in chapter 2), we defined resilience in this study as the capability of SMEs to adopt, growth in performance, and seize business opportunities. Hence, resilience is a multidimensional construct and these three capabilities together comprehensively define the construct amid highly disruptive conditions.

It is also worth noting that developing robust measures requires contextualizing the concept across different contexts and the nature of disruptions. SMEs in DCs are characterized by the highest failure rate (Ayyagari et al. 2011) due to a complex and chaotic environment. This kind of business environment, described by scarce resources and persistently disruptive, denotes the

continuous and multi-faceted nature of disruptions and vulnerabilities of companies. The more and multiple the disruptions, the more resilience is required (Tengeh 2016). Contrarily to this, past research on resilience and its measurement has highlighted discrete (natural disaster) types of disruptions such as the 2008 Hurricanes Katrina and the 2008/09 global financial crisis, as observed by Corey and Deitch (2011), and Pal et al. (2014). Kantur and Say (2015) and Linnenluecke (2017) questioned the applicability of the resilience scale developed in relation to discrete types of disruption when used in another context such as in DCs. If we take seriously the idea that understanding firm's resilience and its measurement is contextual (Xiao and Cao 2017), then it is crucial to understand better what dimensions are applicable to measure the resilience of SMEs in an extremely vulnerable context such as seen in DCs.

In this study, we contribute to the SMEs resilience literature by operationalizing and validating the three dimensions (adaptability, growth and seizing business opportunities) as measures of resilience for this thesis. Detailed procedures that adopted to develop measurement items, substantive validity test, and exploratory and confirmatory factor analysis, are provided in the methodology section (3.3). To the best of our knowledge (see chapter 2, pp: 47), this research is the first to respond to the call for a robust resilience scale in SMEs context especially in DCs such as in Ethiopia. In choosing SMEs in Ethiopia, we assume to gain fundamental insight into the foundation and development of resilience theory. As we already stated, literature thus far provided less attention to how SMEs overcome disruptive situations in such a setting. Even though no study was done in Ethiopia, the study made in Sudan by Branzei and Abdelnour (2010) has found that SMEs which operate in a highly vulnerable business setting required to be more resilient to continue their businesses (Tengeh 2016). By developing a robust resilience measure in such a demanding context, this study makes several methodological contributions. First, the study gives insight into how multi-dimensionality of resilience specifically in SMEs context acts as the bases for measuring resilience. Second, testing invariance of the measurement is needed because a lack of invariance may lead to empirically bias results and then improper theoretical inferences (El-Adly et al. 2017). This is a fundamental concern when making group comparisons. Hence, this study tested a potential measure invariance across gender of SME owner-entrepreneurs.

The rest of this chapter is structured as follows. In section 3.2, we provided a review of the existing literature and proceeded with the discussion about the contextual difference in resilience and its measurements understanding. Section 3.3 presents the research methodology.

In section 3.4, we address results and analysis, followed by discussion, implications, and limitations of the research in section 3.5. Finally, we put forward the conclusions of the chapter in section 3.6.

3.2 Theory

Resilience in theory: Multi-dimensional

Resilience is a multi-dimensional concept in an SME context. The concept comprises various characteristics or features describing how companies behave and respond to turbulent business circumstances. This agrees with Linnenluecke (2017) review covering the resilience literature in a wider business and management streams. However, the complication is that different researchers have identified different characteristics and adopted different conceptualizations for the same notion (Korber and McNaughton 2017). This is mainly due to a fragmented array of definitions of the concept in the literature (Kamalahmadi and Parast 2016). Beyond disjointed definitions of the concept, the divergence of disruptions by intensity and frequency is also an issue of a lack of common understanding (Annarelli and Nonino 2016, Kamalahmadi and Parast 2016, Sullivan-Taylor and Branicki 2011). That is, how to operationalize resilience theory has lagged behind theoretical developments owing to inconsistencies in definitions. According to Salisu and Hashim (2017), as “contentious as the definitions of resilience (are), generally, there has been agreement among scholars that the resilience differs among disciplines and context (places, company’s size, the nature of the threats/events; see PP:45-46)”. They noted, therefore, until these issues have been addressed, the resilience concept and its measurement continue to be vague in literature.

Drawing on both previous chapters, we adopted the capability view (Manfield and Newey 2015, Akgün and Keskin 2014) to operationalize resilience integrating three dimensions: (1) capability to adopt (adaptability); (2) grow (in performance), and (3) seize business opportunities (anticipatory mindset of entrepreneur). The adaptability dimension, here, covers a firm’s continuous transformation, flexibility, and responsiveness to changes in the environment. A study noted that adaptability lies within the realm of contingency theory, and refers to the interface between an organization and its environment (Alonso and Bressan 2015). Adaptive firms demonstrate a capacity to identify emerging opportunity or threat (Hamel and Valikangas 2003, Ates and Bititci 2011), to change resource acquisition and allocation concerning new strategy developments and implementation under varying environmental conditions (Biggs 2011, Bhamra et al. 2011). Indeed, the adaptive capacity is an essential aspect

describing the resilience of SMEs within turbulent situations of DCs. The growth aspect, on the other hand, refers to maintaining a firm positive performance in term of sales, profits, and market share (Williams and Vorley 2017). Resilient firms tend to keep and continuously review their operating and ongoing performance (Dahlberg and Guay 2015). Resilience also can be characterized as the firm’s seizing new opportunities (Lengnick-Hall et al. 2011). The seizing business opportunity dimension entails potential opportunities that discovered by businesses, to maintain competitive advantage despite being challenged by unfolding disruptions (Manfield and Newey 2017). Disruptions provide a window of opportunity as it activates transformation within challenges (Lengnick-Hall et al. 2011). Firms can grow and thrive by turning challenges faced into business opportunities (Seville et al., 2015). The business environment has become increasingly turbulent. Constant change necessitated the identification and development of new capabilities critical for firm sustainability, particularly, in the context of vulnerable settings. Thus, the dimension is crucial in entrepreneurialism (Manfield and Newey 2017), and offers additional insight into SMEs resilience research specifically in vulnerable settings. Based on the conceptualization process, we presented these dimensions measuring the resilience of SMEs a mid of turbulent, resource-scarce context as shown in Figure 3.1.

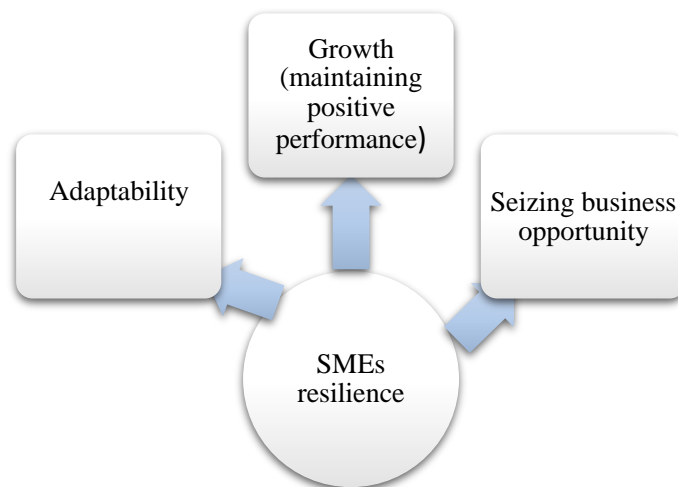


Figure 3.1: SMEs resilience conceptualized based on the existing literature

Understanding resilience in practice: context matters

Understanding resilience requires as well contextualizing to the nature of disruptions: the more persistent the disruptions, the more resilience is required to run businesses (Littlewood and Holt 2018). Disruptive situations trigger companies’ resilience range from discrete/specific event based on persistent/complex forms (Akgün and Keskin 2014). The complexity of disruptions refers to the existence of numerous forms of disruptions including drought, political turmoil,

infrastructural, regulatory, and institutional related difficulties (Linnenluecke 2017). SMEs thought to be more vulnerable to such types of disruptions because of factors such as the relatively constrained resources and the inability to spread the risks across multiple products or markets (Blundel et al. 2014). This is mainly an SME habitat (DCs business context) as it is more turbulent and threatening SMEs existence compared to the developed world (Biggs et al., 2015).

The contextual differences of the vulnerability of companies, for instance in terms of size and gender, are also sensitive issues in understanding the resilience concept in practice. For example, large companies have slack resources that can be utilized when disruptions occur, but SMEs lack such opportunities (Tognazzo et al. 2016). As a result, SMEs are the more vulnerable companies for which achieving resilience is more complicated (Pal et al. 2014). Their limited resource access (Wedawatta and Ingirige 2016), also makes them easily susceptible to disruptions. As a traditional and patriarchal system dominates DCs business settings, female-owned businesses are more vulnerable because the access to essential resources, business ideas, and innovation are more difficult for them when compared to their male counterparts (Mozumdar 2018).

Table 3.1 lists existing studies on organizations' resilience measurement (and their contextual focus) and the dimensions they are designed to assess. As we already discussed, there is no consensus on resilience definition let alone SME's resilience measuring dimensions because most of them drive items from other disciplinary literature (e.g., ecology, disaster, and crisis management) and import to business organizations studies. Conversely, there is a lack of consistency in the operationalization of organizational resilience as evidenced by the dimensions utilized in these studies. Some researcher investigated vulnerabilities, adaptive strategies used, or resources allocation (Biggs 2011, McManus et al. 2007), while others examined individual resilience collectively, or identified resilience based on organizational structure, processes, and practices (Kantur and Say 2015, Lengnick-Hall et al. 2011). Though resilience can be developed and assessed from wide-ranging aspects within an organization, a consistent measuring construct is needed that can be applied to any aspect of an organization within and across contexts (Linnenluecke 2017). Outcomes of resilience do vary, depending on the measures used.

Furthermore, among presented dimensions, adaptive capacity is often utilized as a part of organizations resilience measuring dimensions. However, still, to use this dimension, it requires

contextualizing to entrepreneurship. This dimension describes an organization's ability to consistently and continuously evolve to match or exceed the needs of its operating environment before those needs become critical (Hamel & Välikangas, 2003). To contextualize and operationalize the concept in general business organizations and SMEs, we considered the adoptive capability dimension together with others-ability to grow (maintaining positive performance), and ability seize business opportunities as important dimensions for SMEs resilience in this thesis.

Table 3.1: the review of existing measurements research on organizational resilience from the literature

Authors	Contexts (companies size, nature of disruption, and study setting)	Key findings/ Dimensions used	Disciplines
McManus et al. (2007), (McManus et al. 2008)	Large organizations / natural disaster/ developed world	Anticipatory ability (i.e., situation awareness-ability to forecast potential opportunities and risks); management of keystone vulnerability, adaptive capacity or adaptability (e.g., effective decisions in daily operation and in crises); agility (e.g., timely decision)	Crisis and disaster management
Erol et al. (2010)	Large organizations/community disaster crisis / developed world	Agility, flexibility, adaptability, and connectivity	Developed a framework-enterprise resilience broad, systems-oriented perspective
Somers (2009)	Large organizations and community/disaster crisis planning/ developed world	Continuity of operations planning; Managerial information seeking; Department accreditation; Perceptions of risk; Involvement in planning community; and Organizational Structure	Disaster crisis planning
Pettit et al. (2013)	Large organizations / natural hazards/ developed world	Supply chain resilience (adaptive capabilities)	Supply chain perspective
Kantur and Say (2015)	Medium-sized and large organizations / disaster assessment/ developed world	Robustness-measure the organizations capacity to withstand against and recover from unfavorable conditions. Agility-measure organizations capacity to take actions rapidly. Integrity measures the cohesion among employees in the organization faced with unfavorable circumstances	Systems view and disaster management perspective
Mallak (1998)	Employees in the health care industry/ natural hazards/ developed world	Adaptability (e.g., perform positive adaptive behaviors), agility (e.g., expand decision-making boundaries),	Psychology perspective

		flexibility (e.g., ensure adequate external resources)	
Lee et al. (2013)	Large organizations/community crisis and disaster/developed world	Adaptive capacity and planning	Disaster Management (Assessment)
Ambulkar et al. (2015)	Large logistic organizations/developed world	Adaptive and cope with supply chain disruption changes	Risk management and Supply chain perspective

Need for SMEs resilience measurement research in developing countries

A study on SMEs resilience is scarce in DCs let alone its measurement. This is in contrast to the higher demand for resilience knowledge as they operate in a complex and chaotic environment. Complex and chaos may be related to their external environments encompassing issues such as political instability and conflicts (Branzei and Abdelnour 2010, Tengeh 2016), poorly functioning markets and ‘institutional voids’, institutional inefficiencies, and infrastructural hurdles (Page and Söderbom 2015) and natural environment hazards (Dahles and Susilowati 2015). It is widely known that entrepreneurial activities will decline in the face of such vulnerability (Tengeh 2016). Although SMEs are often under-prepared for disruptions and can suffer disastrous consequences when they experience them, both empirical and theoretical research examining organizational resilience has traditionally focused upon larger businesses and their environments (Sullivan-Taylor and Branicki 2011). Although firm resilience is highly desirable in such a setting to continue business functions, resilience research into SMEs is relatively rare in the context and has been identified as a potential focus for future research (Littlewood and Holt 2018, Dahles and Susilowati 2015). The same holds as well for business companies owned by women entrepreneurs, especially in DCs. In established environments of the developed world, resilience may not be as needed as compared to the hostile environment (Littlewood and Holt 2018).

In addition, the nature of disruptions in DCs is highly persistent, facing continuous disruptions instead of discrete types of disruptions (Tengeh 2016). DCs are a suitable setting for SMEs resilience measurement development, because these companies operate under harsher business environments, given their assumed role for employee contribution and more generally, for household livelihood improvement (Barrett et al. 2017, Nagler and Naudé 2017). Nevertheless, significant pieces of literature in the past have focused more on specific types of disruption such as disaster happenings in the developed world (Kantur and Say 2015). This kind of resilience understandings addresses only the resilience of companies activated when the disruptive situation occurs. These nature of persistent and complex disruptions which demand

organizations to continuously build resilience to ensure their business continuity require more attention (Littlewood and Holt 2018, Sabatino 2016).

3.3 Methods

This chapter aims to contribute to the literature by developing a robust scale for measuring resilience at SMEs acting within a persistently turbulent, resource-scarce business environments such as in DCs. In doing so, we followed the Ambulkar et al. (2015) method. This method consists of five key steps: (1) Review of extant literature to generate dimensions, (2) adopting items for each dimension from existing research, (3) Design the survey and reviewed by experts and academician. Additionally, a pilot study conducted to ensure the face validity, (4) redefine the survey and carry out with a refined survey the data collection, and (5) deploy confirmatory factor analysis to develop the scale. Figure 3.3 below shows a summary of steps followed in developing and validating the SMEs resilience construct.

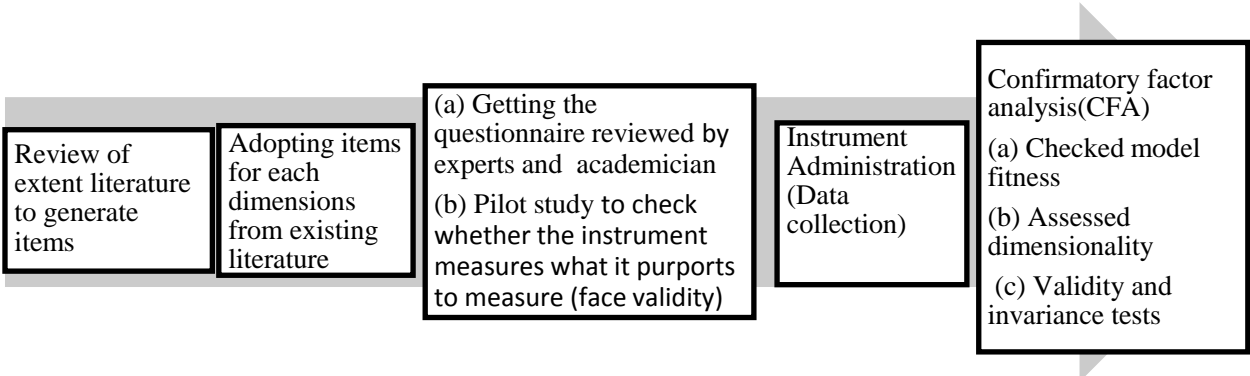


Figure 3.3: Summary of the construct development and validation process

Study settings, population, and data collection procedures

See detail discussion in chapter 1, section 1.4.

Measures

Based on the results of the in-depth review of existing literature (see chapter 2), and underpinned by experts’ feedback and the pilot survey on selected entrepreneurs (See Table 3.2, in Appendix C), we conceptualized SMEs resilience construct as multi-dimensional consisting of firm capability to adopt (adaptability), growth (maintaining positive performance), and seizing business opportunities. To measure the adaptive dimension, we adapted items from prior studies (Peng and Luo 2000, Park and Luo 2001, Ma et al. 2009, Ambulkar et al. 2015). There is little consensus in the existing literature on how to measure a firm’s growth dimension (Wiklund et al. 2009), and hence, scholars have used a variety of

different measures. For this study, we adopted measures for firm growth (growth of sales, profits, and market share) from Patzelt and Shepherd (2011). The seizing opportunities are measured based on previous research (Ozgen and Baron 2007, Singh et al. 1999) relating to the firm ability to discover, recognize and exploit a business opportunity. SMEs resilience was operationalized using 12 items measured on a seven-point Likert scale (1=strongly disagree, 7=strongly agree). The list of these items as they appear in the survey questionnaire is shown in Table 3.3.

Table 3.3: Items measuring business resilience construct (from the questionnaire)

Resilience dimensions	Resilience measuring items	Scale
Growth-maintaining performance (P)	P1: My firm sales increased since the founding of the company, and I expect the same for the coming 2 years.	1=strongly disagree, 7=strongly agree
	P2: My firm profits increased since the founding of the company and I expect the same for the coming 2 years.	1=strongly disagree, 7=strongly agree
	P3: My firm market share increased since the founding of the company and I expect the same for the coming 2 years.	1=strongly disagree, 7=strongly agree
	P4: Overall I expect my firm will grow fast despite facing challenges and disruptions.	1=strongly disagree, 7=strongly agree
Adaptability (AD)	AD1: My firm's ability to handle potential threats from the environment has been greater than that of our major competitors.	1=strongly disagree, 7=strongly agree
	AD2: My firm's capability to succeed in an intensely turbulent business environment has been greater than that of our competitors.	1=strongly disagree, 7=strongly agree
	AD3: My firm's capability to handle potential threats from the environment has been greater than that of our competitors.	1=strongly disagree, 7=strongly agree
	AD4: My firm's capability to adapt quickly to uncertainty in business environments (law, policies, and competitions) has been greater than that of our competitors.	1=strongly disagree, 7=strongly agree
Seizing business opportunities (Opp)	Opp1: My firm regularly monitors any changes and potential business opportunities in our industry of operation.	1=strongly disagree, 7=strongly agree
	Opp2: In the coming six months, my firm will create new business ventures.	1=strongly disagree, 7=strongly agree
	Opp3: While running routine day-to-day activities, my firm recognizes various potential business venture ideas for expansion.	1=strongly disagree, 7=strongly agree
	Opp4: My firm will close in the near future, as a new venture opportunity has not yet recognized. (Reverse score).	1=strongly disagree, 7=strongly agree

Analytical procedures

We applied the step-wise procedure to validate the robustness of the scale. First, we conducted the exploratory analysis to decide on the items that retained in the scale. To retain items, we adopted Hair et al. (2013) recommendation: a factor loading value above 0.6. One item has a loading value which is below 0.60 and therefore was excluded from the analysis. The 11-items measuring the SMEs resilience scale has a scored Cronbach's alpha value of 0.94. The results of the exploratory factor analysis are available in Table 3.4 (See Appendix D). In the second step, we deployed a confirmatory factor analysis (CFA) to validate the robustness of the three

dimensions of the resilience construct for SMEs as underpinned in the prior chapter (see chapter 2). We assessed and compared the competing measurement model's fitness to data. In the third step, we conducted validation tests including the invariance test to prove the items equivalence across the gender of SMEs-owned entrepreneurs.

The χ^2 test often used to assess the goodness of fit for competing measurement models. Nevertheless, Jöreskog (1969) stated that the χ^2 test has a drawback since the test is highly dependent on the sample size. The significance can be easily attained if we use large sample sizes (Hair et al. 2012). It is recommended therefore supplementing this test with other indices (El-Adly et al. 2017) such as (1) chi-square to degree of freedom ratio (χ^2/df), (2) Goodness of fit index (GFI), (3) comparative fit index (CFI), (4) Tucker-Lewis Index (TLI), and (5) Akaike information (AIC), (6) Bayesian information criterion (BIC), and Root mean square residual (RMSEA). Hence, we deployed these indices to compare and chose the best-fit model by competing different SMEs resilience measurement models when using the data.

3.4 Results

Confirmatory Factor Analysis

The next step was to assess the dimensionality of the construct using confirmatory factor analysis (CFA). The CFA is a well-established technique for testing and developing robust measurement (Hair et al. 2012, Fornell and Larcker 1981). The three dimensions of the resilience construct were subjected to CFA analysis. We adopted a maximum likelihood estimation to examine the robustness of these three hypothesized resilience dimensions for SMEs. Following El-Adly et al. (2017), we tested and compared a series of models to choose the best fitting model to the sample data. We tested a set of models consisting of (A) a one-factor model (suggesting that the all observed items represented a unidimensional construct); (B) a two-factor model, including adaptive and seizing opportunities capabilities, to serve as components of a two dimensional construct; and (C) a three factors model (comprising adaptation, growth, and seizing business opportunities) as a three dimensional construct.

Table 3.5 results display the indices of the competing models. Analysis of the indices supports the hypothesized-three-dimensional construct for SMEs resilience (see Table 3.5 model C), comprising companies' adaptive, growth and seizing business opportunity capabilities. We checked the loadings of the standardized items (seen in Figure 3.3). We observed a high score indicating all items significantly loaded on their respective dimensions. When we look at the indices score reported for each model, we observed model C not only registered the lowest

X^2/df and RMSEA scores, but also had the highest GFI (=0.99), CFI (=0.95), and TLI (=0.93) compared to the other two models. Although model B fit best in AIC and BIC indices, we still consider model C as the best fit, considering the principle that the model with more fit indices is better (El-Adly et al. 2017). As a result, we continued the validation tests with model C. This study found that resilience in an SME context is a multidimensional construct and that it integrates three dimensions. This finding agrees to Kantur and Say (2015) analysis.

Table 3.5: Goodness of Fit Indices¹³

Model/Indices	X^2	df	X^2/df	GFI	CFI	TLI	AIC	BIC	RMSEA
A	806.9	44	19.7	0.94	0.80	0.75	12281	12413	0.207
B	165.6	14	11.8	0.93	0.93	0.89	8103	8187	0.086
C	230.6	41	5.6	0.99	0.95	0.93	11710	11854	0.076

After choosing the model, respecification or modification was conducted to assess for a possible improvement of the fitness the model to the data following Byrne (2001). According to Byrne (2001), conducting a modification analysis on the chosen model or searching the best fitting model aids to correct for inappropriate parameters encountered in the estimation processes and thus helps to attain on robust measurement structure. The modification search process is conducted by considering the residual covariance statistics. We set a minimum threshold of 10 covariances static (Ahmad et al. 2011). We draw covariance for all items in which the covariance statistics are above 10. Following this, we made an exhaustive search process (modification) for possible improvement of the fitness of the measurement model ($X^2/df=4.35$, GFI=0.99, CFI= 0.969, and TLI= 0.952) and that we, finally, arrived at a resilience measurement framework that is shown in Figure 3.3.

¹³ Note: $X^2/df \leq 6$, $GFI \geq 0.90$; $CFI \geq 0.90$; $TLI \geq 0.90$; $RMSEA \leq 0.10$, and the lower the AIC and BIC is the better the model Bagozzi, R. P. & Yi, Y. 1988. 'On the evaluation of structural equation models.' *Journal of the academy of marketing science*, 16:1, 74-94, Bagozzi, R. P. & Edwards, J. R. 1998. 'A general approach for representing constructs in organizational research.' *Organizational research methods*, 1:1, 45-87, El-Adly, M. I., El-Adly, M. I., Eid, R. & Eid, R. 2017. 'Dimensions of the perceived value of malls: Muslim shoppers' perspective.' *International Journal of Retail & Distribution Management*, 45:1, 40-56.

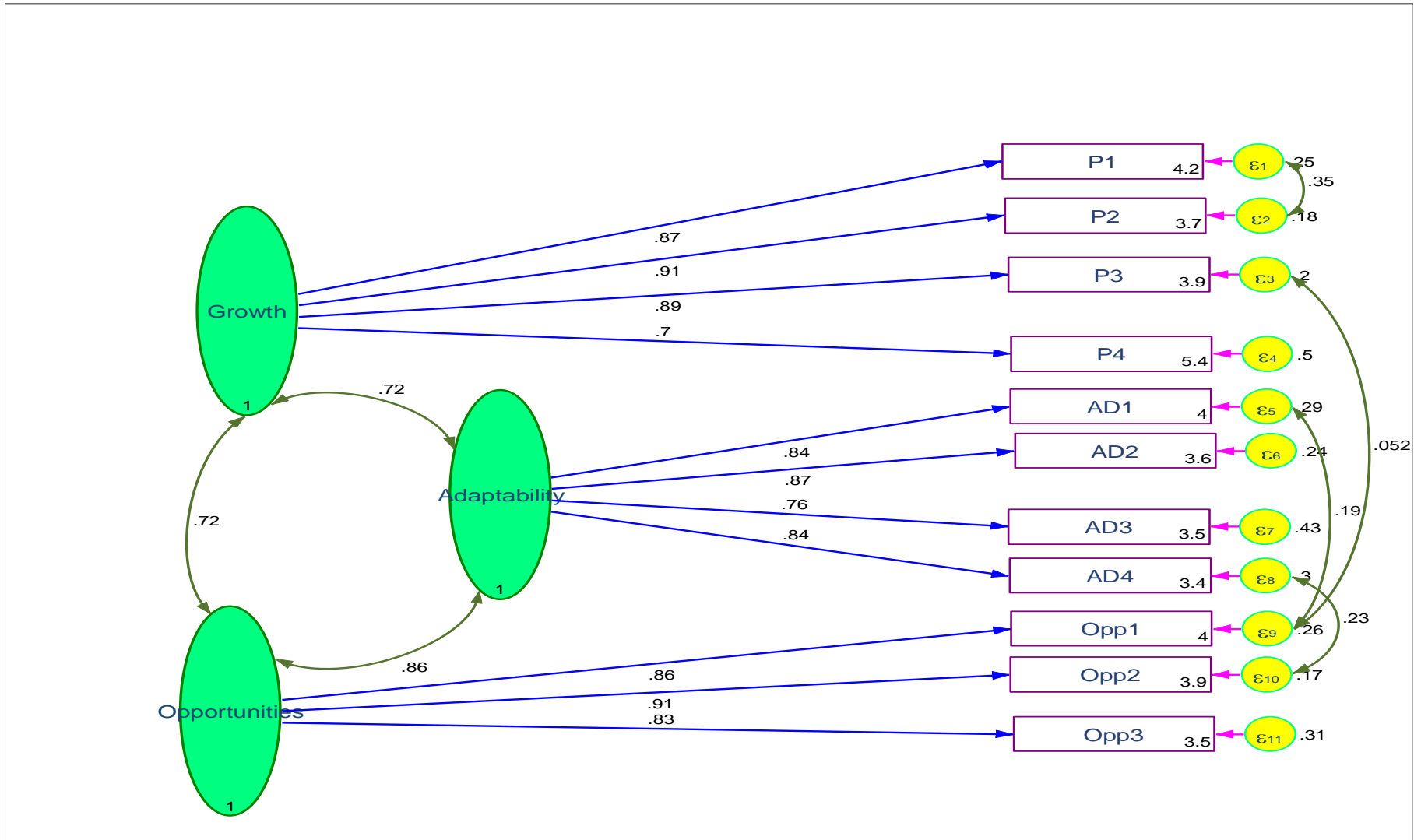


Figure 3.3: a confirmatory factor analysis results (SMEs resilience construct)

Reliability and validity tests

We conducted a series of validation tests (reliability, convergent, discriminant, and invariance) to ensure the robustness of the measurement developed.

Reliability test. Reliability assesses the degree to which a set of indicators of a latent construct is internally consistent based on how highly interrelated the indicators are with each other (Hair 2010). To check the reliability of the construct, we tested composite reliability. This test is useful as it helps to assess the internal consistency of the items used (Hair et al. 2006); i.e., it provides evidence that all items have measured the general resilience construct. According to Fornell and Larcker (1981), to pass this test, each dimension needs to score above 0.70. The formula used by Fornell and Larcker (1981) to calculate the composite reliability will be:

$$\omega = (\sum \lambda)^2 / ((\sum \lambda)^2 + \sum e_i)$$

Where ω is the coefficient of composite reliability, λ_i and e_i is the i^{th} factor loading and its uniqueness (McDonald 1970).

Table 3.6: Reliability of business resilience construct¹⁴

Construct dimensions	ω
(1) Adaptability (AD)	0.91
(2) Growth-maintaining positive performance (P)	0.90
(3) Seizing opportunities (Opp)	0.90

As shown in Table 3.6, the composite reliability score for all dimensions exceeds the Fornell and Larcker (1981) threshold. This indicates that the items used to measure the resilience construct have strong internal consistency and that they contribute to the general resilience construct.

Construct validity. To ensure the robustness of the developed construct (Barclay et al. 1995) assessing the construct validity is essential. The convergent and discriminant assessments are the often-used approach to test the construct validity.

¹⁴ Note: ω =Cronbach's alpha value; λ =Composite reliability

Convergent validity. The items that are indicators of a specific construct should converge or share a high proportion of variance, known as convergent validity. According to Hair et al. (2006), various procedures are available to test the relative amount of convergent validity among item measures. Here we have adopted two approaches: factor loadings and average variance extracted. The first approach, the value of the factor loading is an important consideration. High loadings on a factor indicate that they converge on a common point, the latent construct. At a minimum, all factor loadings should be statistically significant. We adopted Hair (2010) highest threshold i.e., at least a score 0.7 value. Results displayed in Figure 3.3 show that all items' loading value is above the threshold and significant. Hence, this test satisfies the requirements. The second approach is to calculate the average variance extracted (AVE). AVE is calculated from the items loading value on a construct and is a summary indicator of convergence. Based on Fornell and Larcker (1981) recommendation, the AVE value can be calculated using standardized loadings:

$$AVE = \sum_{i=1}^n Li^2 / n$$

The component “Li” represents the standardized factor loading, and it is the number of items. So for n items, AVE is computed as the total of all squared factor loadings (squared multiple correlations divided by the number of items). An AVE of 0.5 or higher suggests evidence of convergence validity (Fornell and Larcker, 1981). The AVE value computed for each dimension (latent construct) in a measurement model. As indicated in Table 3.7, the AVE values for all dimensions found above 0.50 and thus confirmed the convergent validity of the resilience construct.

Table 3.7: Convergent validity of business resilience construct

Dimensions of resilience construct	AVE
(1) Adaptability (AD)	0.69
(2) Growth-maintaining positive performance (P)	0.72
(3) Seizing opportunities (Opp)	0.75

Discriminant validity. Discriminant validity assesses to what extent these items measuring the resilience construct are unique from each other (Henseler et al. 2015). To investigate the discriminant validity, we followed Hair et al. (2006) procedures. First, we checked all the items' loadings seen in Figure 3.3. Our analysis shows that all items have a loading value exceeding the

0.5 recommended by Fornell and Larcker (1981). Next, we used the correlation matrix and the square root of AVE to assess the discriminant validity of the dimensions. To meet the conditions for acceptable discriminant validity, Fornell and Larcker (1981) suggested that the square root of average variance extracted (AVE) of each dimension should be higher than the correlations between any combinations between any two pairs of dimensions in the model. The logic here is based on the idea that a latent construct should explain more of the variance in its item measures that it shares with another construct (El-Adly et al. 2017). Passing this test provides good evidence of discriminant validity. Results shown in Table 3.8 confirmed that the square root of AVE for all dimensions (diagonal) is higher than any correlation value among dimensions, except for correlations between Adaptability (AD) and seizing opportunities (Opp). Holding out such exception; the measurement model represents a good discriminant validity.

Table 3.8. Discriminant and correlations matrix between constructs¹⁵

	Dimension 1	Dimension 2	Dimension 3
Adaptability (AD)	0.84		
Growth-maintaining positive performance (P)	0.74	0.85	
Seizing opportunities (Opp)	0.89	0.76	0.87

We analyzed to what extent the exception can be accepted. As per Fornell & Larcker (1981) recommendation, two criteria needed to overpass such exception. First, we verified the existence of a significant inter-correlation among dimensions. Our analysis confirmed that the inter-correlations among the three dimensions were significant at (P<0.001). Second, we checked each items factor loadings and (Farrell 2010) recommended values greater than 0.5. As shown in Figure 3.3, the CFA analysis results show that all items scored a loading value greater than 0.5. Based on these diagnoses, we decided that the exception could be tolerable. The implication of this is that all items are distinguishable, and this ensured the discriminant validity of the measurement model as Fornell & Larcker (1981) suggestion.

As shown in Table 3.8, the resilience measurement for SMEs integrates three dimensions. The correlations among all dimensions of resilience construct are positive and significant. This implied

¹⁵ In **bold** the square root of AVE. All correlation values are significant at $p < .001$ level. $N=408$

that to measure the resilience of SMEs, researchers have to consider holistically (El-Adly et al. 2017) the three dimensions together rather than piecemeal.

Measurement invariance

Cross-culture entrepreneurship researchers have stated that testing measurement invariance is essential to ensure the robustness of the scale developed, as there exist differences in motives and aspirations towards entrepreneurialism among a different group of entrepreneurs (Runyan et al. 2006, Runyan et al. 2012). While sex is a biologically based labelling that classifies individuals as male or female, gender is the socially-situated conduct that aligns normative expectations of appearance, attitudes, and behaviours of men and women (West and Zimmerman 1987, Runyan et al. 2006). Thus, gender includes social roles that are based on biological sex but created through socializing systems (Ridgeway 2011). Due to differences in social position, the aspiration of resilience and their response action to disruptions may be different between women and men entrepreneurs (Young et al. 2017). Meaning, the items measuring the resilience construct and its underlying dimensions may be perceived differently (Runyan et al. 2012), driven by entrepreneur’s (e.g., women) position in the family and as well as in society.

There are various invariance tests in the literature (Bagozzi and Yi 1988). In this study, invariance tests were performed using: configural and metric invariances. The results for each invariance test are explained below (see in Table 3.9). The Table demonstrates the invariance tests¹⁶ results and their corresponding decisions.

Table 3.9: Invariance test

Test types	χ^2	df	P	χ^2/df	CFI	TLI	Action	Decision
Configural invariance	331.89	95	0.000	3.49	.93	.92	Nothing constrained-two group model estimate	Accepted/ Robust
Metric invariance	334.08	96	0.000	3.48	.93	.92	Factor loading constrained	Accepted/ Robust

Configural invariance test assesses whether the factor loadings have equivalent values across the male-female groups. To evaluate this invariance, we assessed the two-group CFA model (where

¹⁶ The fitness indices: $\chi^2/df \leq 6$; CFI ≥ 0.90 ; TLI ≥ 0.90

no cross-group constraints imposed). Results indicate the two-group model fits the data well (see their $\chi^2(95) = 331.89$, $p < .00$, $\chi^2/df = 3.49$, CFI = .93, and TLI = .92). These results elucidate that the resilience scale displays configurable invariance across two groups, i.e., the measured items show the same pattern of loadings for men and women-owned SMEs. Next, we fit the same two-group model to test metric invariance, to examine if the factor loadings are equivalent or different across the group. Under metric invariance, the factor loadings are constrained to be equal across groups, but no other equality constraints are imposed (Bagozzi and Yi 1988). To do so, we constrained all of the factor loadings to be equal across groups. Results again confirmed that the model fit the data well ($\chi^2(96) = 334.08$, $p = .00$, $X^2/df = 3.48$, CFI = .93, and TLI = .92). We also conducted a chi-square difference test between the two models. The difference was not significant ($\chi^2(1) = 2.19$). As non-significance is expected for invariance, we conclude that the business resilience construct is metrically invariant across the gender of SMEs-owner, allowing meaningful group comparisons to be made. These tests have confirmed that these items used to construct the resilience scales are equivalent across gender of SME-owners.

3.5. Discussion and conclusions

Our goal with this study was to develop a robust resilience measurement for SMEs in persistently turbulent, resource-scarce environments. The results showed that the SMEs resilience construct encompasses three dimensions; growth, adaptability and seizing business opportunities. The scale has acceptable reliability. The construct has acceptable convergent and discriminant validity. Furthermore, analysis of invariance of SMEs resilience construct revealed the consistency in factor structure between men and women entrepreneurs supported configural and metric invariance across the groups. Overall, the results showed that the 11-item SMEs resilience scale, developed in the current study, is a reliable and valid scale.

A first contribution to the resilience knowledge base is that this study introduces for first time measurement scale for resilience in the context of SMEs and DCs, i.e. turbulent, resource-scarce contexts. The findings show that the resilience construct of SMEs in a vulnerable business context is multi-dimensional encompassing the three theoretically assumed dimensions: growth, adaptability, and seizing business opportunities. The present study hence empirically validated previous researches (Williams and Vorley 2017, Annarelli and Nonino 2016, Akgün and Keskin 2014) which theorized resilience in general as multidimensional.

However, specifically, the three dimensions found in this study are strictly taken the key attributes for measuring resilience in the Ethiopian SMEs context. Resilience understanding is context dependent (Linnenluecke 2017). Hence we explored robust resilience measurement in a specific context. Although the basic theory applies, the construct may need to be added or modified based on the specific context (Chu 2015). Diverse nature of disruptions and cultural differences may suggest alternative dimensions to be considered indicating the possible modification of the present measurement in line with diverse contexts (Akgün and Keskin 2014). This could include the extension and hence modifications of the dimensionality of the SMEs resilience construct depending on the specific context. For example, Kantur and Say (2015) research, which developed the measurement for large organizations, supported the multidimensionality although used different items which were adopted from crisis and conflict management literature. Our research differs in that we developed a construct of resilience from items often used in entrepreneurship and SME literature. As the resilience concept within the context of SMEs and vulnerable environments is in its infancy stage (see sections 2.1 and 3.1) and on the other hand, the importance for the socio-economic practice and academia to develop a robust measurement scale, we call for future research building on the result of the present research. As theory building is the main research focus within the area of company resilience at this stage (Akgün and Keskin 2014), a promising way forward is to integrate items used by Kantur and Say (2015) into the current developed SME's scale and thus to validate whether they are relevant for SME resilience measurement too. In conclusion, the scale developed in the current study aims to contribute to the development of quantitative studies in the SMEs resilience research by developing a robust scale. Future research is needed to revalidate the scale with a diverse set of samples such as different contexts, different sectors and developed and developing countries comparison.

Developing a robust measurement scale for resilience also touched upon a gender – resilience discussion among academia. Several scholars have raised concerns that entrepreneurship and firm resilience does not take place in a gender vacuum (Marlow 2002, Young et al. 2017). The effect of this is that SMEs vulnerability to disruptions and their response may vary based on the socio-economic class of business owners such as gender (West and Orr 2007), making it likely that these groups would perceive resilience measuring items differently and/or make different resilience investment decisions (Young et al. 2017). A study suggests that higher risk aversion and deeper

commitment to long-term employees prompt female business owners to make decisions that improve firm resilience to disaster (Danes et al. 2009). To arrive at such kind of a conclusion requires ensuring the measurement equivalence across male and female entrepreneurs. To generate reliable insights into comparative analyses a bias-free measurement is a prerequisite. Following this reasoning, our work adds to existing research testing the scale-developed invariance using two often-used invariance tests (configural and metric). The tests ensure that our instrument is invariant and thus it can be used for comparative analysis to generate reliable research insights about gender difference related concerns on SMEs resilience in DCs.

Implications for practice

SMEs are viewed as a backbone for many countries' economy through the sector scored the highest failures rate due to resource scarcity and vulnerability to unfolding disruptions emanating from their business environment. The disruptive situations threatening SMEs existence in developing countries are recurrent, numerous and chaotic in character. Therefore, in such persistently disruptive and vulnerable business environment, typical of circumstances that prevail in DCs, researching about the resilience of SMEs is imperative. We argue that developing the scale measuring SMEs resilience is necessary but not the end in itself. The present research develops a robust resilience measurement that furthers the assessment of the level of resilience of SMEs in the DCs environment. The measure could help the policymakers to evaluate how SMEs become more resilient and contribute well to the economies in the context.

The proposed scale can be used as a diagnostic tool for SMEs to take appropriate decisions on how to create resilient companies. This helps SMEs owners to have a comprehensive inventory of their firm performance, which can be used to identify areas of strength and areas in need of improvement. SMEs wishing to sustain their existence need to set appropriate strategies to maintain their firm resilience in the mid of resource-scarce and vulnerable environments. Their sustained venture has a triple down effect on the livelihood of the firm owners and economies of the countries as well as they play a crucial role in generating employment. Exploring what drives resilience is also a relevant topic to research. Research related to the importance of being resourceful for a firm's success and performance has been dominating SME literature mainly drawing on the resource-based view approach. However, several scholars in recent years suggest that possessing various resources is necessary, but they are not sufficient conditions to ensure the firm's development. In

his work Sirmon et al. (2007) proposed that what matters more is rather the entrepreneurial resources orchestration actions (i.e., resource structuring, bundling, and leveraging actions taken by entrepreneurs). Drawing on this perspective, Miao et al. (2017) suggested the firm owner's entrepreneurial orientation (referring the practices, decision-making styles, strategies, and behaviours) drive these actions. Effective management of these actions via entrepreneurial orientation (EO)'s thus relevant for developing resilient SMEs. Future research should investigate if these resource orchestration actions channelled via EO really matters to advance SMEs resilience in Ethiopia and other similar emerging economies supported by the developed resilience scale.

The findings also have implications for organizations that aim to support SMEs to become more resilient and successful in their business venture. Government institutions, NGOs, policymakers, and development organizations can take into consideration the key resilience components in their development intervention agendas.

Limitations

The current study still has some limitations. **First**, due to lack of consensus on what is the resilience of SMEs, the concept is used to refer to many other related aspects such as survival, flexibility, vulnerability, responsiveness, sustainability, and robustness (see chapter 2, pp:8-10). Consistent with the work of Manfield and Newey (2017), who argued that the resilience concept holds a portfolio of capabilities. We combined these diverse aspects into resilience capabilities, as they are interrelated to one another and hence we limited to three dimensions (firm growth, adaptability, and seizing business opportunities) to describe the resilience construct in SMEs and DCs context. Future research may include more and/or other dimensions depending on the particular context and improve our holistic understanding of the resilience of SMEs. **Second**, the samples of the study may be another limitation. We only selected samples from two microfinance institutions in the context of Ethiopia due to budget and research time constraint. This may limit the generalizability of the results to other types of SMEs in another similar context. In the future study, it will be valuable to repeat the present study in other types of SMEs in Ethiopia and the other DCs economies.

Chapter 4

Entrepreneurial Orientation (EO) and Resource Acquisition: Using Social Capital in Turbulent, Resource-Scarce Business Environments

Abstract

This study responds to the call to open the “black box” between firms’ resources and their business resilience as suggested (e.g. Hitt et al. 2011, Sirmon et al. 2007), by drawing on resource orchestration theory (ROT). ROT, theorizing opening the black box, identifies three subsequent processes from which resource structuring (especially resource acquisition) is the first one in that series. Resource acquisition has been debated in strategic entrepreneurship for a long time. The question about the driver of resource acquisition especially in a turbulent, resource-scarce environments (as in developing countries) remains underexplored. Scholars (e.g. Huang and Wang 2013, Lumpkin and Dess 1996) theoretically posited the effect of entrepreneurial orientation (EO) on resource acquisition; however, little empirical research has been done in such a context. Contingency is introduced by the influence of social capital (business vs social ties), and the level of disruptions firms face in their business environment, on the relation between EO and resource acquisition. This study deployed a partial least squares structural equation modelling (PLS-SEM) using SmartPls software. Using an original data set of 408 Ethiopian small and medium enterprises (SMEs), we proved that having higher EO fuels firm’s resource acquisition in such a context. Both business and social ties directly contribute to firm resource acquisition. The moderating effect of these ties on this relationship is also checked; social ties are a significant EO-booster in the context. Theoretical significance and managerial entanglements of these findings for SMEs in developing economies, are presented.

Keywords: Resource orchestration, Resource acquisition, Entrepreneurial orientation, Social networks, Turbulent, Resource-Scarce Business environments

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4.1 Introduction

Nowadays, building small and medium enterprises (SMEs) resilience is a key topic in the academic and policymakers' circles. However, there is not much research on strategies building resilient SMEs. To build resilient SMEs is described as a resource consuming activity (see chapter 1, section 1.1). The resource situation of SMEs is different from that of larger firms. SMEs are often confronted with limited financial and human resources, restricted market power, and a small customer base. This so-called liability of smallness, newness or adolescence (Akğün and Keskin 2014, Aldrich and Auster 1986) in short is the opposite of large firms' surplus resources (Tognazzo et al. 2016). Hence, resource acquisition is of particular concern for SMEs (Wang and Clegg 2018). Acquisition of resources is a necessary condition to enable companies to operate their routine and strategic function (Miao et al. 2017). Especially for SMEs in resource-constrained and chaotic business environments like in developing countries (DCs), getting access to resources is the most challenging task (Wang and Clegg 2018, Page and Söderbom 2015). This challenge is counterposed to the pressure on entrepreneurs to acquire resources. According to Huang and Wang (2013), obtaining unique resources is determinant for performance as they likely shift the balance between success and failure in favour of a firm. Indeed, understanding what drives firm resource acquisition is crucial since resources can create sustainable competitive advantages and thus achieve the resilience of companies. However, what enables the entrepreneur to acquire resources is still under-discussed.

Resource acquisition is addressed as key entrepreneurial contribution and actions (Huang and Wang 2013). Scholars posited that entrepreneurs with higher entrepreneurial orientation (EO) tend to be more effective in resource acquisition (e.g. Lumpkin and Dess 1996, Hughes and Morgan 2007, Chen et al. 2007). Deploying EO dimensions (innovativeness, proactiveness, and risk-taking), therefore, drives firms' resources search and acquisition in a way that proactively motivates their managers and strategic decision-makers to go outside boundaries of the firm to change its system of constraints (Su et al. 2011). As such, EO affects a firm's resource acquisition and thereby resilience if it is put to good use. Despite EO's assumed relation, limited empirical research has been done investigating EO influence on firm resource acquisition especially in a turbulent, resource-scarce contexts such as in DCs (Alberti et al. 2018, Huang and Wang 2013). Prior research notes that SMEs operating in DCs lack strategic resources, such as skills, knowledge,

and finance due to barriers related to the business environment (Worku 2013). On the other hand, the reality in DCs with their amount of SMEs (see section 1.3) seems to suggest that resource acquisition is successful. In such a setting, researching the EO effect on a firm's resource acquisition is in need especially for SMEs. Such research not only confirms the role of the manager, entrepreneur in resource acquisition, but it renders insight in the orientation with which entrepreneurs face turbulent, resource-scarce situation and can explain the seemingly successful presence of SMEs in such condition.

The deployment of EO dimensions is subject to conditions in the business environment (Rosenbusch et al. 2013). Conditions in the environment influence the strategic decision making and practices of entrepreneurs and the effect of EO on performance (Eisenhardt and Schoonhoven 1990). In DCs, companies are confronted with complex, varied, and persistent forms of business disruptions, triggering a resource challenging business context and making SMEs more susceptible to failures. According to Wiklund and Shepherd (2005) and Huang and Wang (2013), indeed such type of business environment may also prompt EO pre-emptive action on resource acquisition.

Another contingency introduced in this study that influences the relation between EO and the firm's resource acquisition is the social capital or social networks that entrepreneurs possess (Huang and Wang 2013). Social capital and networks are essential to draw resources from suppliers, families, and friends, etc. Possessing active social networks or ties enable firms to bring in new resources and knowledge that can mitigate uncertainty surrounding the implementation of EO-instigated initiatives (Kim et al. 2017, Boso et al. 2013). Indeed, the effect of EO on a firm's resource acquisition is dependent on the strength of social capital, or networks ties that entrepreneurs build (Huang and Wang 2013). In this study, the distinction is made between two types of network ties, that is the distinction between business and social ties being the most used types of ties in entrepreneurship research (Boso et al. 2013). Thus, when investigating the effect of EO on a firm's resource acquisition, the moderating effect of social networks on the relation between EO and resource acquisition represents an important research agenda.

This study aims to examine the effects of EO on resource acquisition moderated by the two mentioned types of social networking in a resource-scarce and resource demanding setting. Data for the study was collected from 408 Ethiopian SMEs. The research framework is shown in Figure

4.1 (see page 105). The other contingency involves the effect of business environment on EO. This study covered the following three research questions: (1) Does EO influence firm resource acquisition? (2) Which type (s) of ties (i.e., business vs social) boosts EO and firm resource acquisition relationship in DCs, i.e., in this case, Ethiopian context? (3) Do the turbulences and hostility circumstances in the environment negatively influence the EO strategic role to acquire resources? By exploring these questions, our study delivers both theoretical and practical contributions. Theoretically, we attempt to explore how EO influences firm resource acquisition to enhance the deployment of ROT to SMEs in turbulent, resource-scarce business environments. Also, by conducting a fine-grained investigation of into the moderating effect of business and social ties networking, this study aims to provide insights about the contingencies of different networks on EO – resource acquisition relationship. Further, this will help to extend the idea of EO for resource structuring (especially acquisition) as theorized by Lumpkin and Dess (1996) and pointed out in Huang and Wang (2013) proposition.

4.2 Theory

Entrepreneurial orientation (EO)

Recently a focus developed in the literature on what entrepreneurs do in organizations rather than on what they are (Miao et al. 2017). The construct of EO, focusing on what entrepreneurs, is one of the most widely researched themes in the strategy entrepreneurship literature (Wales et al. 2013). EO captures managerial practices, processes, actions, and decision making styles that entrepreneurs adopted in running their businesses (Wiklund and Shepherd 2011). For this reason, several scholars state that EO can serve as a source of sustainable competitive advantage (Wiklund and Shepherd 2005), and of superior firm resilience (Alberti et al. 2018). We have conceptualized EO, in this study, on an entrepreneurial and individual level as most SMEs are owned and managed by a single person, a characteristic of SMEs in most DCs (Page and Söderbom 2015). Hence, in such a setting firm's and individual entrepreneur's behaviour and actions are inseparable. This indicates that EO can be an entrepreneurial set of activities and practices which renders strategic direction to the process of building resilient businesses.

Research describes that most of the DCs are experiencing rapid structural changes, increased environment uncertainty, political turmoil, and unbalanced growth (Nagler and Naudé 2017,

Littlewood and Holt 2018). These changing situations in such environments unquestionably have shaped the entrepreneurial resource acquisition actions, and consequently, this will play a key role in the process of building resilient companies in such a setting. EO takes strategic relevance in such a setting as it supports the process of searching, acquiring and accumulating resources (Alberti et al. 2018, Lumpkin and Dess 1996) in a manner that fosters firm's resilience capability (Manfield and Newey 2017). However, the strategic orientation literature is not yet clear whether it is appropriate for entrepreneurs to invest in EO to make sure it facilitates firms' resource acquisition in such a turbulent, resource-scarce business environments, such as those experienced in DCs (Huang and Wang 2013)

Miller (1983) sees strategically oriented entrepreneurs get ahead of competitors by their own EO's innovative, proactive and risk-taking facets. Following Miller's definition, EO has been widely used to describe a consistent pattern of actions and attitudes (Ginsberg and Venkatraman 1985, Lumpkin and Dess 1996, Morris and Paul 1987, Rauch et al. 2009). Lumpkin and Dess (1996) conceptualized EO by five dimensions. However, most researchers considered three core dimensions to be sufficient to describe EO, i.e. innovativeness, proactiveness, and risk-taking aspects of companies (Hughes and Morgan 2007, Miller 1983, Wiklund and Shepherd 2005). These three dimensions may be independently variable and may occur in different combinations (Lumpkin and Dess 1996, Wiklund and Shepherd 2005, Rauch et al. 2009). This study deploys EO to constitute innovativeness, proactiveness, and risk-taking activities on entrepreneurs in managing their own businesses.

The EO innovativeness dimension stands for an entrepreneurial ability to conceive new ideas and implement new methods, practices, product design, services, or processes (Li et al. 2008). The dimension describes the entrepreneur's preparedness to support creativity and experimentation of new ideas (Lumpkin and Dess 2001). However, exploring new things that have not previously existed is a resource-intensive activity (Covin and Wales 2012) and indicating effective implementation of EO needs acquisition of more resources from an external environment. Another EO dimension is proactiveness that elaborates insights about the likelihood of a future action that needs to be made by entrepreneurs considering the dynamism of markets and consumer demands (Covin and Wales 2012). From a market perspective, proactiveness enables firms to use a first-mover advantage vis-à-vis competitors (Lumpkin and Dess 2001). Proactive behaviour is a

tendency to look to the future and a progressive entrepreneurial actions that capitalize on emergent opportunities (Rauch et al. 2009). Risk-taking describes the tendency to tolerate the uncertainty that results from entrepreneurial activities and practices (Lumpkin and Dess 1996). Such entrepreneurial practices within firms involve investing a significant proportion of resources in a project with a high probability of failure (Hughes et al. 2015).

Resource acquisition

Resource Orchestration Theory (ROT) sheds light on the acquisition and usage of resources¹⁷. According to Sirmon et al. (2007) and Sirmon et al. (2011), resource orchestration contains three management activities, i.e. resource structuring, bundling and leveraging. These processes elaborate on what makes a few firms to be more successful while many others fail. It also entails the importance of efficient management for resources conversion to capabilities leading to desired firm outcomes, i.e., firm resilience. Effective implementation of these processes in the actual and real-world fills the missing understanding between the static conceptualization of resources and firm resilience¹⁸. The dynamic notion is that if researchers have insight into entrepreneurs' capability to arrange and deploy their resources in these different activities, there will be a better understanding of how they are able to build resilient enterprises. These activities involve creativity and exploratory learning in order to create novel capabilities (Sirmon et al. 2011, Sirmon et al. 2007). Sirmon et al. (2011) suggest that a complete understanding of these cycles is not only a necessary condition for entrepreneurs to make effective decisions on how to build resilient firms but also for academics to build a more accurate, theoretical linkage between resources and firms' outcomes.

The resource-structuring phase, which is the interest of this chapter, involves an entrepreneurial capability to acquire, accumulate and divert resources to form the firm's resource portfolio (Sirmon

¹⁷ *Resources are inputs that a firm uses for running a business, which can be classified as tangible and intangible. The acquiring of these resources is considered here as a resource acquisition. In this sense, the construct of resource acquisition has two dimensions: the outcome (showing the acquired resources by a firm), and the process, or activity (indicating the extent that a firm can mobilize resources from the external environment through credit financing means such as from suppliers).*

¹⁸ *Due to scarcity of research associating resource orchestration theory (ROT) to firm business resilience, we used here these literature that related ROT to firm success and firm performance. Firm resilience in this chapter, therefore, can be considered as firm success/better performance.*

et al. 2011). The acquisition of essential, valuable, and rare resources seems the first crucial process in the ROT (Huang and Wang 2013). The resource acquisition is as important as what firms do with their resources (Hansen et al. 2004, Penrose 1959). Penrose (1959) asserts that acquiring valuable, unique and core resources among others enables to boost business success. The firm's business success is better explained by differences in the acquisition of strategic resources, in an uncertain, turbulent and complex business environment (Huang and Wang 2013, Wernerfelt 1984). Of course, acquiring resource is not the last step as developing activities to configure the resource's overtime into resources which cannot easily be imitated by others, also determinate (Chirico et al. 2011, Wales 2016) better outcomes.

To conceptualize the concept of resource acquisition, we distinguish two dimensions: resource acquisition as an activity (search, getting access), and resource acquisition as an outcome (the acquired resources). With this distinction, we align with Su et al. (2011) who explicitly mention 'resources search and acquisition' in their explanation of how EO drives resource acquisition, and we were inspired by Adler and Kwan's (2002) distinction made in social ties (see section 4.2). Resource acquisition as an activity indicates the act of generating resources. In this research, the focus is on sources of the resources (e.g., families, (micro) financing institutions, and suppliers), the act of searching and accessing credit financing acquired or used from suppliers. Resource acquisition as an outcome focuses on the result of generating; thus the acquired resources. Huang and Wang (2013) described that the term resources involves various perspectives, such as tangible-intangible resources, capabilities, distinctive competencies, strategic resources, critical resources. Additionally, Chirico et al. (2011) discussed that resources cover many issues such as the strength or weakness of a given firm for example reflected in their brand name, knowledge, skills, trade contacts, machinery, capital, and efficient procedures. Barney classified resources that are crucial for firm business sustenance into three major groups; human, financial, and physical capital (Barney 2001).

Entrepreneurial orientation and resource acquisition

The EO captures methods, practices, dispositions, decision-making styles, behaviors, and processes underpinning the firm's strategy creation practice, competitive posture, and management philosophies, and thus encapsulates entrepreneurial tendencies of the firm (Covin and Wales 2012, Lumpkin and Dess 1996, Wiklund and Shepherd 2003, Wiklund and Shepherd 2005). Wiklund and

Shepherd (2005) argued that being entrepreneurial matters for strategically facilitating and influencing a firm's resource acquisition process. As such, EO underlies firm performance (Covin and Wales 2012). In the previous section, we noted that EO comprises three core dimensions: innovativeness, proactiveness, and risk-taking (Huang and Wang 2013), where each of these dimensions contributes to active resource acquisition actions. Innovativeness as an essential dimension of EO which reflects how entrepreneurs facilitate the creation of new products and services, which is a manner of value creation to maintain the firm's superior performance. To introduce new products and services, entrepreneurs need to explore the possibility of unique resources. However, to facilitate innovation, several other factors also matter for example the nature of broader business environments such as environmental stability related to macroeconomic, and laws and regulatory conditions (Lepak et al. 2007).

The issues of risk and proactiveness dimensions of EO also deserve attention. Risk-taking refers to "the degree to which entrepreneurs are willing to make large and risky resource commitments – i.e., those which have a reasonable chance of failures" (Miller and Friesen 1982). By emphasizing bold and exploratory activities, firms with high EO are gifted in creating resource configuration decisions and reshaping market conditions to their advantage (Baker and Sinkula 2009). These days, firms operate their business in a hostile and dynamic business environment to such an extent that the dangers of risk exposure hardly need to be mentioned (Williams et al. 2017). However, it is relevant to note that risk-oriented entrepreneurs tend to seek new resources (Lumpkin and Dess 1996, Hughes and Morgan 2007).

Addressing the relationship between EO and resource acquisition, the assumption rises that proactive entrepreneurs seek specific and valuable resources to enhance their steady growth and resilience as proactiveness involves "taking the initiative in the struggle to shape the surroundings to one's advantage" (Lumpkin and Dess 1996). The proactive aspect helps an entrepreneur to take quick action to harness the first-mover advantage, which consequently influences market directions (Hughes and Morgan 2007). In addition to EO, the characteristics of the business environment and entrepreneurial involvement in a more extensive social network (Robins 2015) facilitates effective resource acquisition. The following hypothesis then emerges:

H1: Entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) will be positively related to resource acquisition.

Social capital and resource acquisition

Social capital (SC), or social networks¹⁹ also enable entrepreneurs to draw resources from external environments (Boso et al. 2013, Cao et al. 2015). The social network is a term that concedes a very broad range of meanings (Boso et al. 2013). For example, Adler and Kwon (2002) looked at the social network as the goodwill that is engendered by the fabric of social ties and that can be mobilized to facilitate resources and information sharing. Bourdieu (2011) defined the concept as the aggregate of actual or potential relationships of mutual acquaintance or recognition. According to Nahapiet and Ghoshal (1997), the term social networking broadly describes the sum of the actual and potential resources embedded within the network of relationships built by entrepreneurs to achieve an organizational advantage. This study adopts Nahapiet and Ghoshal (1997) definition, referring to the social networks as ties that embed information, business idea, skills, and resources entrepreneurs' may access in order to create reciprocal values to accomplish purposive actions.

Ostgaard and Birley (1994) illustrated that possessing social networks is a conduit through which entrepreneurs access valued resources that would merely be unavailable otherwise. It is fair to say that there is general agreement that a high level of social network built on a good reputation, practical experience, and direct personal contacts often assists entrepreneurs in gaining access to venture capital, key sources of competitive information, suppliers and potential customers (Chisholm and Nielsen 2009, Florin et al. 2003). The core idea of social networks of individuals and enterprises, underpinned by shared norms, trust, and reciprocity, is to provide support for resource acquisition in a vulnerable setting (Biggs 2011). However, different social network classifications exist in the literature (Watson 2012). According to Adler and Kwon (2002), the classification is based on whether the focus is on the substance or the sources of the effects of social networks. Considering the latter focus, the work of Boso et al. (2013) has labeled various social networking types into two major categories: business (ties with external persons such as suppliers, customers, and other business firms), and social (relations with local associations and people mostly composed of families, friends, and or person with the same ethnicity).

¹⁹ In this study, we use the term social capital and social networks interchangeably.

Business ties involve a business transaction, for example, with suppliers and buyers, in formal or informal ways (Yiu et al. 2007). This type of network allows entrepreneurs to benefit from information transfer and resource sharing through contacts and links between partners (Li et al. 2010, Li et al. 2009). According to Li et al. (2010), “ties with the business community provide opportunities for shared learning, transfer of inside information, and resource exchange to adapt to the unfamiliar market”. Boso et al. (2013) also assert that being “equipped with useful ties with top managers in competitor firms, for example, firms benefit from a greater exchange of market wisdom and industry-wide insider information, which can aid effective targeting of market offerings, all of which may facilitate business success”. Moreover, Stam and Elfring (2008) presented that if the firm has stronger business ties, the intra-group transaction costs can be minimized, and access to critical resources (such as labour and financial capital) is maximized. We expect that possessing more business ties offer several benefits for SMEs including accessing non-redundant information, improved coordination of logistical efforts, and reduced transaction costs (Boso et al. 2013, Wang 2016).

In addition to business ties, scholars have also highlighted a direct contribution of social ties to firm resource acquisition (see Acquaaah 2007, Robins 2015). Firms in DCs are highly affected by institutional voids, inadequate information and market failures conditions (Boso et al. 2013). In Ethiopia, for example, Worku (2013) put forward strong ties with “*Iquib*²⁰” (formed from friends, families, and people in the neighbourhood), as a vital instrument to access finance and credit. Thus, we formulated the following hypotheses:

H2: A higher level of business ties will be positively related to firm resource acquisition.

H3: A higher level of social ties will be positively related to firm resource acquisition.

Social capital as a moderator

EO is also a resource-consuming strategic orientation (Lumpkin and Dess 1996, Tengeh 2016) (Teng, 2007); without considerable resource support, the strategic effect of EO on the resource acquisition may be obstructed (Su et al. 2011). The solution for this is to invest in different types of social networks. Beyond the direct role of enabling access to more resources, social networks

²⁰ *Iquib* is given the local name for rotating savings and credit associations, which unusually formed by friends and or people in the neighborhood.

also appear particularly important as they support EO-firm resource acquisition relationship. Generally, possession of different types of networking allows the firm to bring in new resources and knowledge that should lessen the uncertainty surrounding the implementation of EO-derived initiatives (Miao et al. 2017, Huang and Wang 2013). Owning ties with a diverse set of social networks enable to strengthen the EO-resource acquisition relationship (Cao et al. 2015, Huang and Wang 2013). Yet, different categories of social networks or ties may have various benefits in different environments (Boso et al. 2013). We expect different types of social network (relations) that the firm has built with other network actors may affect the impact of EO on resource acquisition. It is, therefore, necessary to recognize the heterogeneity of contextual factors upon the EO - resource acquisition linkage (Rauch et al. 2009). This indicates an imperative need to reconsider the effectiveness of different types of social networking for EO. The social networks resource acquisition roles are likely to vary in different environments. This is especially true in resource constraint and demanding environment such as in developing countries, where business-supporting systems are not fully matured given under-developed legal, regulatory, and normative institutions (Li et al. 2010, Luo et al. 2008).

Although the diverse classification of social networking exists in literature, in this study, we specifically focused on the two theoretically distinct categories of social networks, i.e., business vs social ties (Boso et al. 2013). We expect these ties can support the effective implementation of EO-actions by allowing firms to choose appropriate strategies that may be more demanding in terms of resource requirements, but that also have better chance to maintain the resilience of SMEs. Business ties involve networking with suppliers, customers, and other firms (e.g., competitors) provide a vital boost for EO functions. The institutional environments in DCs often restrict firms to acquire resources and technologies; hence, firms' business ties can help to overcome institutional voids problems and allow firms to connect to banks, suppliers, distributors, buyers and customers (Khanna and Rivkin 2001). Thus, we argue that in this way the business ties indirectly influence EO-resource acquisition in the resource-scarce environment such as in DCs.

Exploring the role of social ties in EO and resource acquisition relationship is also needed in the resource-constrained setting because such types of relations are prevalent in the context that could substantially shape business activities (Bekele and Worku 2008a, Acquaaah 2007). According to Acquaaah (2007), since in developing economies (such as sub-Saharan Africa) due to intensely

collectivistic culture still prevail they are increasingly communal, with local community leaders (e.g. chiefs, kings, priests, and industry leaders) providing substantial resource allocation and information dissemination roles. In the same way, evidence by Viswanathan et al. (2010) demonstrated that in more collectivistic and largely under-developed societies, local market information sharing is a social and informal relational activity. Social ties, constituting ties with people such as friends, families, the same ethnic group, and neighbour, or local areas, often channel information and resources which can boost EO action and realization (Bruhn et al. 2010) though they are also criticized for redundancy of the information (Burt 2002). High EO entrepreneurs may enjoy considerable advantages in terms of favorable access to privately controlled resources, market intelligence, policy changes, as well as competitive trends. Such resources are needed to pursue entrepreneurial strategies (Rosenbusch et al. 2013). These advantages of information enable high EO firms to pre-plan for a better strategy to gain resources from networks, highlighting a moderating role of social ties on EO resource acquisition relationship (Huang and Wang 2013).

H4: Business ties will positively moderate the EO-resource acquisition relationship, such that the higher the number of business ties, the stronger the relationship between EO and resource acquisition will be.

H5: Social ties will positively moderate the EO-resource acquisition relationship, such that the higher the number of social ties, the stronger the relationship between EO and resource acquisition.

EO and business environment hostility

Firms need to acquire resources from their external environment and turn them into products and services, exploring and exploiting opportunities provided by the environment (Rosenbusch et al. 2011). EO's importance for acquiring these resources is also dependent on conditions in the business environment (Rosenbusch et al. 2011). The relationship between the business environment and EO seems to be highly complex. The entrepreneurial activities seem to be highly dependent on the nature of the business environment (Eisenhardt and Schoonhoven 1990). The business environment covers a wide range of issues including politics, culture, socio-economic conditions (Rosenbusch et al. 2011). Depending on the situation, the environment may affect positively or negatively EO initiative and that, in turn, influences the resource acquisition process (Huang and Wang 2013). The business environment contains favorable and unfavorable situations

for business operations. The unfavorable and turbulent environment is characterized by hostility, uncertainty and filled with ranges of disruptions. Hostile conditions in the business environment may induce competition for scarce resources and opportunities (Covin and Wales 2012, Miller 1983). The persistence of disruption and vulnerability conditions may also vary from context to context. For example, in DCs, firms face continuous, and numerous ranges of disruptions and are more vulnerable to failures due to the pressure of business environment than in other regions. Such business environments tend to put negative pressure on EO actions (Fuentes-Fuentes et al. 2004). This is a condition of business circumstances typically prevalent in developing countries. Indeed, acquiring resources may be the most challenging for SMEs in such a setting and developing their EO capability may be more helpful to address the challenges.

EO actions may be affected by the nature of the business environment (Huang and Wang 2013). The few studies that examined antecedents of EO (e.g. Sciascia et al. 2006, Zahra et al. 2004) have focused on the developed world context or internal factors of the firm (Mozumdar 2018). We propose to go more deeply into a particular antecedent of EO, testing how disruptive and hostile business environment affect EO especially in a highly turbulent, resource- scarce context, i.e. in DCs.

The discussion here goes to whether perceived hostility of the business environment has positively or negatively put pressure on the EO - resource acquisition relationship. According to Covin and Slevin (1989), firms operating in a hostile setting require strategic actions because wrong decisions could even endanger the survival of a firm. Acquiring resources such as financial capital is the most challenging task in such a context (Huang and Wang 2013). In such an environment, thus, substantial competitive advantages cannot be easily be maintained unless the ability to develop a series of strategies to acquire resources for business operation is present (Morrow et al. 2007). Accordingly, EO may be an inefficient response to hostility condition but a legitimate strategic orientation in less hostile environments (Mozumdar 2018).

On the other hand, for example, a company that engages in a product innovation strategy under the condition of intense price-based competition may fail because the innovation does not meet demands and the firm suffers from an unwillingness of customers to value innovations with a price premium (Zahra 1991, Zahra and Bogner 2000). The hostility of the business environment is likely

to affect the scope and nature of EO (Zhang et al. 2010). As a result, a more disruptive and hostile environment is expected to put negative pressure on the EO functions and, in turn, lower the influence of EO on the firm’s resource acquisition. Out of this discussion, the following hypothesis emerges:

H6: A high level of business environment hostility tends to put pressure on the positive role of EO in a firm’s resources acquisition activities.

Figure 4.1 presents a summary of our hypothesized model

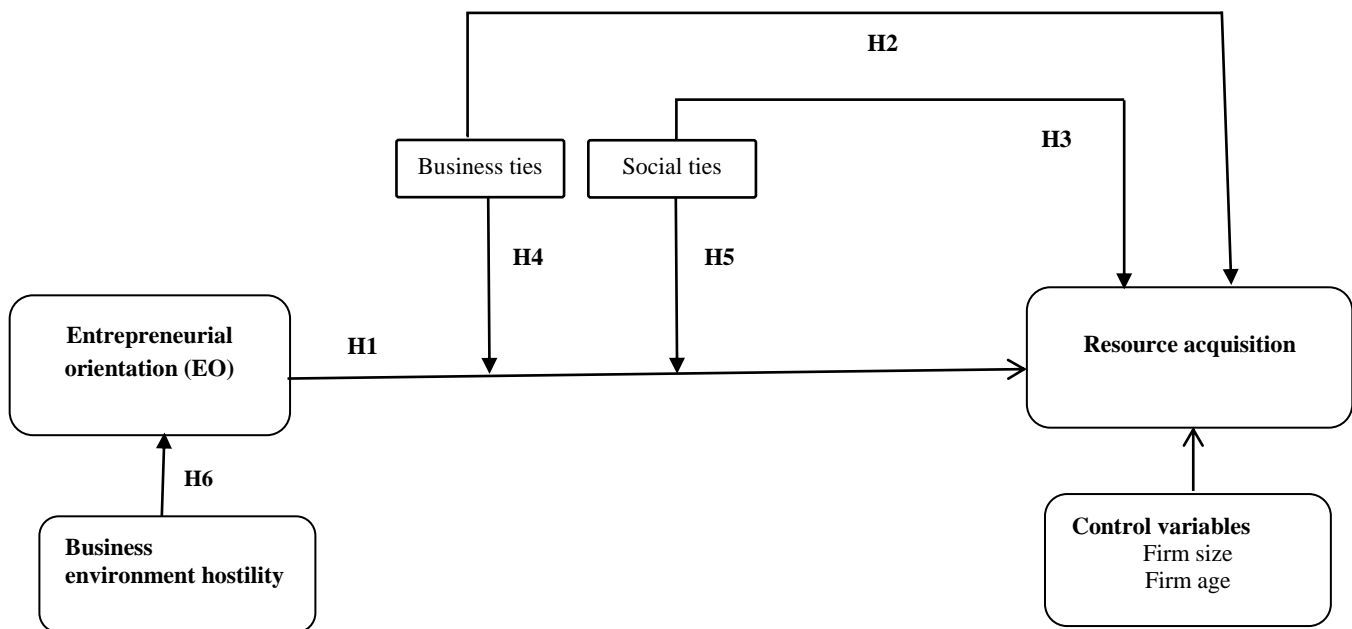


Figure 4.1: Conceptual model

4.3 Methods

Study setting

To test our hypothesis, we considered non-farm entrepreneurs (SMEs) operating in Ethiopia as a study setting (See figure 1.4, in Chapter 1). Ethiopia offers a suitable research setting among sub-Saharan African countries, as one of the fast-growing economies, with average GDP growth of 10.8% over the decades (Brian 2015). Despite such a success story, however, much of the Ethiopian people continue to share the basic characteristics of an impoverished society. Supplementary to this, during a recent time slot (2013 to 2017), the country has to undergo a substantial wave of protests, mainly from youth. There are also risks of spillover of turmoil and conflicts across

Ethiopia's borders challenging businesses. An alarmingly rising youth unemployment has become a big concern for Ethiopia, and thus scholars suggest the need to expand SMEs as a potential strategy to absorb these challenges (Page and Söderbom 2015). Unquestionably, this has created challenges for SMEs in all sectors and contributed to disruptions that necessitate resilience research. The resource scarcity feature of SMEs in general and specifically for SMEs in DCs setting such as Ethiopia is also another attention of this research (see chapter 1). Acquiring resources is a big challenge for SMEs and thus threatening their survival and growth in such a setting. The multiple environmental challenges such as increasing drought and pressure on natural resources challenge the resilience of Ethiopian SMEs. Economic wise, expansion of the services and agricultural sectors account for most of the registered growth, while the private sector mainly manufacturing sector performance was relatively modest. Besides, the private consumption and public investment explain demand side growth with the latter assuming an increasingly important role in recent years (Page and Söderbom 2015). Considering all these facts, Ethiopia is a useful case example to show how the EO assisted resource acquisition and the company's business resilience in a developing economy (see as well chapter 1, section 1.4).

Sample and data collection

This study aims to examine the EO influence on resource acquisition in a turbulent, resource-scarce business environment. Our empirical analysis focuses on Ethiopian non-farm small and medium enterprises (SMEs). Chapter 1 has described the sample and data collection methods in detail (see section 1.4).

Measures

Entrepreneurial orientation (EO)

The scales used to measure the EO construct were obtained from the literature. We utilized multiple items to capture the three dimensions of EO (risk-taking, innovativeness, and proactiveness) that were conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1989), however, slightly adapted to suit better the context of Ethiopian non-farm SMEs operating in a resource-scarce and challenging business environment. We deployed 11 items scale to measure the three dimensions of the construct (see Table 4.1, in Appendix E). All items used to measure the constructs of EO were measured on seven-point Likert scales, ranging from "1" (strongly disagree) to "7" (strongly agree), except the resource acquisition construct.

Resource acquisition

Resource acquisition construct comprises of two dimensions (see section 4.2), i.e. (1) outcome containing both physical and financial operating capital acquired, and (2) and activities of acquiring these resources, for example, through credit mechanism, to mobilize the needed resources for business operations (Byrne 2001: see section 4.2, Adler and Kwon 2002). To measure the resource acquisition construct, we adopted different items that measured with varying scales. On the basis of Huang and Wang (2013), we developed a latent construct representing resource acquisition from three observed items: the outcome based items on total physical assets firm's accumulated, company's current operating finance in use, and the activity-based item the extent respondents use or acquired resources from suppliers' via credit financing structures. We included this latter item because the more companies are able to access credit financing service from suppliers, the more they can handle the constraint related to cash financing input hurdles. The physical capital and operating finance variables were transformed to logarithm for normalization purpose. To measure the extent of easy access to needed resources from suppliers, resources acquisition from suppliers by using credit financing forms, seven-point Likert scales were applied, ranging from "1" (strongly disagree) to "7" (strongly agree). Thus, the resource acquisition latent construct is measured by the sum of the scores of total physical assets, operating finance, and extent of firms' access to suppliers' credit (See Table 4.1, in Appendix E).

Social capital: social and business ties

There is a variety of classification of social capital (SC) in literature. In this study, we considered the business ties and social ties classification following Boso et al. (2013), Sheng et al. (2011), Bekele and Worku (2008b). Following Sheng et al. (2011), business ties capture the extent to which firms establish good relationships with other business partners including customers, competitors, technological collaborators, and marketing collaborators, were measured with 3 items. Similarly, based on Bekele and Worku (2008a), social ties, reflecting relationships between entrepreneur's and business supporting social groups in the communities, were measured with 2 items (See Table 4.1, in Appendix E).

Business environment hostility

To measure the business environment hostility level, we deployed several items. However, after the validation process was undertaken, the three items relating to lack of institutional support,

infrastructures hindrances (such as electricity, land, road, transportation, and water etc), and market access hurdles to map the more challenging conditions for entrepreneurs in the study context), were adopted (See Table 4.1, in Appendix E). The respondents were asked to rate, on seven Likert scale point, ranging from “1” (very low) to “7” (very high), and their perception about supporting institutions, infrastructures, and market access challenges.

Control variables

Businesses of different size and age may exhibit different organizational and environmental characteristics, which in turn may influence the firm’s resource acquisition. Therefore, these variables were included as controls. First, to measure a firm age, respondents were asked what year their firms were founded, which was used to calculate firm age. The firm age was measured by the logarithm of the number of years since the firm was started. Second, to assess a firm size, respondents were asked how many individuals worked in the firm on average each year between 2013-2016 and expected to work on average in 2017, including working owners and part-timers, and to estimate the corresponding full-time equivalent number of employees. The firm size variable was then measured by the average (mean) of the number of employees of the firm (average of 5 years). The values of these variables were transformed to logarithm for normalization purpose.

Analysis methods

Partial least squares (PLS) structural equation modelling (PLS-SEM) using SmartPLS 3.2 software was used to estimate our model and test the associated research hypotheses (Ringle et al. 2005). PLS-SEM is an appropriate method in this context since it yields more stable estimators with small sample sizes and can also operate with indicators that do not follow a normal distribution (Henseler and Fassott 2010). The approach places a very flexible restriction concerning the distribution and population of the study (Haenlein and Kaplan 2004). It also has the possibility of providing a more reliable and accurate computation for moderating effects because of its accounts for error that is capable of reducing the possible relationship as well as the improvement of the validation of the theory (Helm et al. 2010, Henseler and Fassott 2010). Furthermore inline to Hermon Statistical approach (Podsakoff et al. 2003), we tested the common method variance (CVM) and known as bias. We ensured that the CVM is not a problem in this study, because the Hermon test value obtained is less than the 50% threshold suggested under this approach (Podsakoff and Organ 1986).

4.4 Results

Table 4.2 Descriptive statistics

Constructs/Variables	Mean	S.D	1	2	3	4	5	6	7
Resource_acquisition	4.29	1.40	1						
EO	5.49	0.95	0.21*	1					
SC_businessties	5.60	1.24	0.49**	0.41**	1				
SC_socialties	4.77	1.32	-.31**	0.10	0.31**	1			
Business_environment _hostility	4.87	1.28	-0.10	-0.20*	-0.05	-0.14	1		
Firm_size	4.04	4.36	0.19*	0.36**	0.20*	0.09	-0.17*	1	
Firm_age	4.86	4.23	0.00	-0.04	-0.02	0.01	-0.01	0.02	1

Significance level: ***p < 0.01 **p < 0.05 *p < 0.1

Table 4.2 offers descriptive statistics and correlations between variables included in the partial least square analysis. The mean score statistics of the constructs (resource acquisition, EO, SC_businessties, SC_socialties, and business environment hostility) were computed to reflect each distinct factor's level of importance. Among others, the mean score of SC-business is high (mean=5.60). The average size of the participating firms was about 4 employees. Among the sampled firms, 50 percent had below 3 employees, 48 percent had 3-100 employees, and 2 percent had above 100 employees. Whether the firm is characterized as “small”, “medium” or “large” is not straightforward and depends on the industry in which it competes. However, it is reasonable to argue that in an Ethiopian context, some of the firms in the sample, particularly those that exceed 100 employees, are considered large firms. The weight of the sample skews toward SMEs, as this category constitutes 98 percent of the total sample.

Measurement model results

A PLS Algorithm was used to assess the validity and reliability of the items. The content validity of a construct signifies that all the items designed to measure a particular construct should have a high loading in the construct. Thus, factor loading could be used to assess content validity as recommended by (e.g. Hair et al. 2012). However, if some items load on some other construct, these items will be deleted. Table 4.3 indicated that the entire variable significantly loaded on their respective constructs. Table 4.3 and 4.4 show the item loadings are above the critical threshold of $\geq .50$ as suggested by Gefen et al. (2000). The reliability was also attained by applying composite

reliability (see Table 4.4), the values were more than the required cut-off value of $\geq .70$ (see Hair 2010). Additionally, the convergent validity was also achieved since average variance extracted (AVE) reached the minimum criteria of 0.5, its values range between 0.516 to 0.827 (Fornell and Larcker 1981, Henseler and Fassott 2010).

Table 4.3 Items cross-loadings

Resource acquisition	Your firm gets easy access to needed resources from suppliers using credit financing	0.65	0.29	0.43	0.33	-0.15
	Total physical assets mobilized (log)	0.75	0.38	0.24	0.23	-0.26
	How large is your current operating finance (log)	0.82	0.38	0.36	0.20	-0.23
Entrepreneurial orientation (EO) ²¹	EO_R1	0.40	0.81	0.50	0.28	-0.17
	EO_R2	0.34	0.78	0.40	0.20	-0.17
	EO_R3	0.34	0.80	0.41	0.24	-0.19
	EO_I1	0.42	0.81	0.40	0.27	-0.27
	EO_I2	0.30	0.75	0.32	0.27	-0.09
	EO_I3	0.48	0.85	0.46	0.29	-0.26
	EO_I4	0.36	0.79	0.38	0.27	-0.22
	EO_P1	0.37	0.79	0.47	0.26	-0.11
	EO_P2	0.41	0.83	0.50	0.28	-0.16
EO_P3	0.31	0.79	0.41	0.22	-0.17	
Social capital (Business ties)	Ties with suppliers	0.46	0.52	0.91	0.39	-0.13
	Ties with customers	0.42	0.49	0.90	0.41	-0.10
	Ties with other_firms	0.40	0.44	0.91	0.35	0.02
Social capital (Social ties)	Ties with other local associations	0.28	0.25	0.40	0.78	-0.16
	Ties with ROSA	0.26	0.24	0.24	0.74	-0.13
Business environment hostility	Business support (Institutional voids)	-0.16	-0.07	0.03	-0.10	0.55
	Infrastructural related hurdles	-0.21	-0.17	-0.06	-0.13	0.75
	Market access related hurdles	-0.24	-0.22	-0.09	-0.17	0.83

Table 4.4 Internal Consistency (reliability) and Average Variance Extracted

Constructs	Composite Reliability	Average Variance Extracted (AVE)
Resource acquisition	0.94	0.83
EO	0.95	0.64
Business ties	0.76	0.52
Social ties	0.73	0.58
Business environment hostility	0.79	0.56

The other test of the structural equation model is discriminant validity. The discriminant validity test is key for model evaluation (Bagozzi and Edwards 1998). The test ensures that a constructed measure is empirically unique and represents phenomena of interest that other measures in the

²¹ R = risk taking, I = innovation, and P = proactiveness

structural equation do not capture (Hair et al. 2012). As can be seen in Table 4.5, the test was also achieved as the square root of the AVE were higher than the inter-correlation of each of the study's construct in relation to other constructs of the research model (Hair et al. 2006, Hair et al. 2011) and also higher than the construct correlations (Chin 2010). It is fair to say that the measurement model satisfactory met the internal consistency reliability, convergent, and discriminant validity. Thus, the constructs are valid and reliable for further analyses.

Table 4.5 Discriminant Validity (for constructs)

Constructs	Business ties	EO	Business environment hostility	Social ties	Resource acquisition
Business Ties	0.91				
EO	0.53	0.80			
Business environment hostility	-0.08	-0.23	0.72		
Social ties	0.42	0.32	-0.19	0.76	
Resource acquisition	0.45	0.47	-0.29	0.34	0.75

Structural Model Results (PLS Path with controls and moderators)

Structural model evaluation is appropriate for the assessment of a predictive or causal relationship between constructs in the model (Binz et al. 2013, Hair et al. 2013). According to Hair et al. (2012), the significance of path coefficients is a critical criterion for assessing the structural model fitness in PLS. The path coefficient expresses the strength of the relationship between the two constructs. To evaluate the predictive power of the structural model, R2 was calculated and reported (see Table 4.6). According to Barclay et al. (1995), the R2 indicates the amount of variance explained by the exogenous variables. The result of R2 illustrates that the variables included explained 40% of the model. The path estimates and t-statistics were calculated for the hypothesized relationships using a bootstrapping technique with a re-sampling of 5000. Table 4.6 contains hypothesized relationships in our model (presented in graphical form in Figure 4.2), their path coefficients and t-values. The results are that EO and resource acquisition has a strong positive relationship. The business environment variable found to affect EO negatively and thus implying the hostile conditions in the business environment distracts the effectiveness of the EO for firm resource

acquisition in Ethiopia. Besides, results show that both ties are found valuable for supporting entrepreneurs to acquire and accumulate resources from the external environment. Hence, our hypotheses 1, 2, 3, and 6 are supported.

Table 4.6: Results of Path analysis

Hypothesis	Path from	To	Control variables Coefficients (t) ^a	Main effects Coefficients (t)	Moderating effects Coefficients (t)
Control variables	Firm_size (log)	Resource acquisition	0.29*** (4.81)		
	Firm_age (log)	Resource acquisition	0.11*** (2.61)		
EO -> Resource acquisition	EO	Resource acquisition		0.22*** (3.94)	
Business environment hostility-> EO	Business environment hostility	EO		-0.23*** (5.15)	
Business ties -> Resource acquisition	Business ties	Resource acquisition		0.26*** (4.47)	
Social ties -> Resource acquisition	Social ties	Resource acquisition		0.12*** (2.57)	
EO*Business ties-> Resource acquisition	EO*Business ties	Resource acquisition			-0.04 (0.91)
EO*Social ties-> Resource acquisition	EO*Social ties	Resource acquisition			0.08* (1.82)
	R ²	Resources acquisition		0.40	

***: P<0.01, **: P<0.05, *P<0.1

^a Values of t were calculated through bootstrapping with 5000 resamples

Figure 4.2 shows the pictorial representation of the results

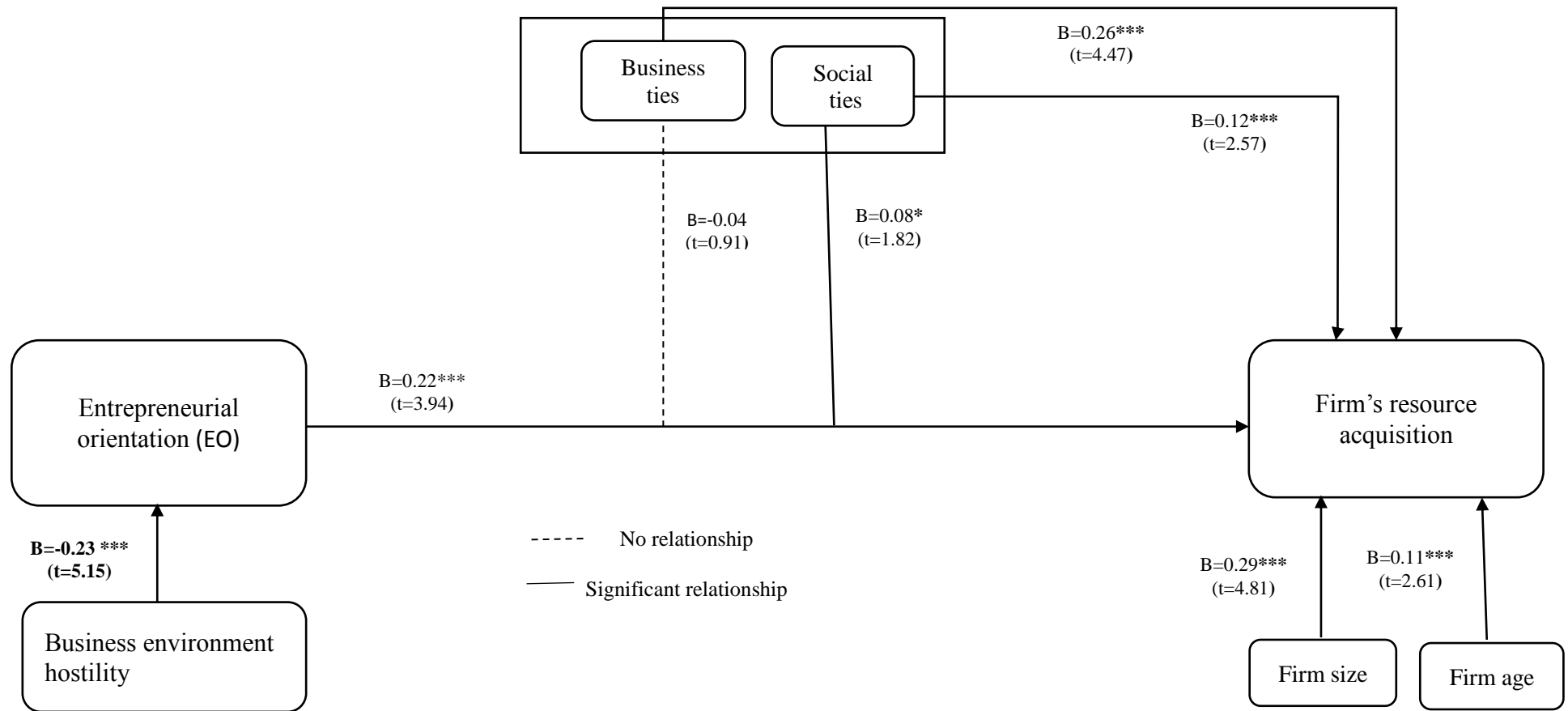


Figure 4.2: PLS Results

Moderator analysis

To ascertain whether business and social ties can upkeep or limit EO in acquiring resources, we performed a moderator analysis. The results show that (see Table 4.6) the EO-firm resource acquisition relationship does not significantly differ between high and low business ties. Hence, hypothesis 4 is not supported. On the other hand, our result indicates that social ties significantly moderate the influence of EO on resource acquisition. Hence, in the context of Ethiopia, social ties take a significant role in advancing the EO role for resource acquisition, and our hypothesis 5 is supported. The social ties EO-resource acquisition moderation analysis is displayed in Figure 4.3, below.

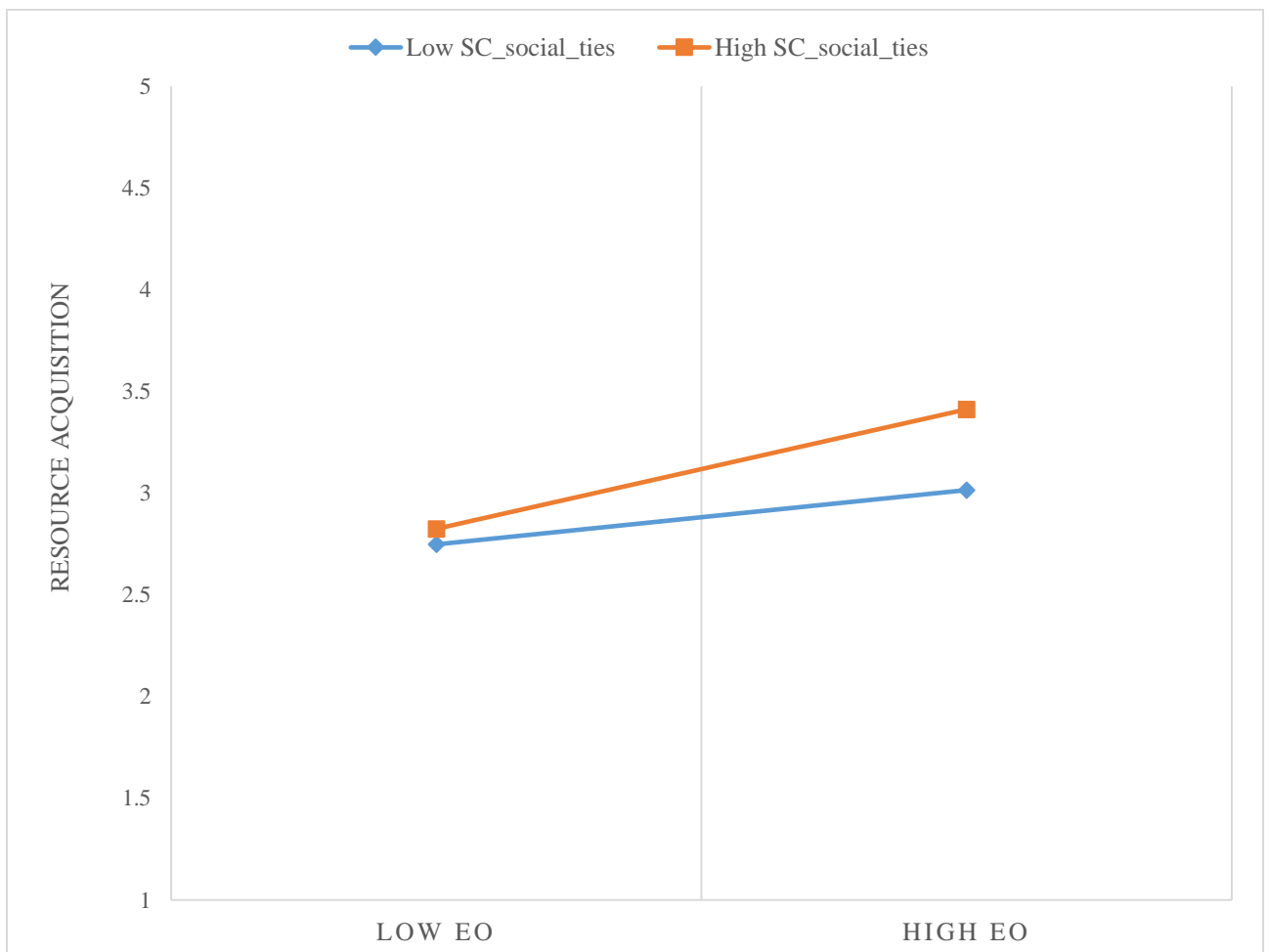


Figure 4.3: Moderating effects

Table 4.7: below provide a summary of results for all hypotheses

Hypothesis	Decisions
H 1: Entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) will be positively related to resource acquisition.	Supported
H2: A higher level of business ties will be positively related to firm resource acquisition.	Supported
H3: A higher level of social ties will be positively related to firm resource acquisition.	Supported
H4: Business ties will positively moderate the EO-resource acquisition relationship, such that the higher the number of business ties, the stronger the relationship between EO and resource acquisition will be.	Not supported
H5: Social ties will positively moderate the EO-resource acquisition relationship, such that the higher the number of social ties, the stronger the relationship between EO and resource acquisition.	Supported
H6: A high level of business environment hostility tends to put pressure on the positive role of EO in a firm's resources acquisition activities.	Supported

4.5. Discussion and Conclusions

Small and Medium-sized Enterprises (SMEs) are vital engines for the economy of developing countries (DCs). Indeed promoting their resilience is an essential issue. To maintain these firms resilience, the acquisition of crucial resources for business operation is vital (Wang and Clegg 2018). However, acquiring resources is the most challenging task for small business companies like SMEs. Scholar-practitioners call for a better understanding of the drivers of resource acquisition for these firms (Huang and Wang 2013), as they are vital for maintaining firm resilience amid unfolding and chaotic business environments like in Ethiopia. In this line of call, our study was motivated by the desire to extend the resource orchestration theory and mainly how the first process in that theory; the resource structuring (acquisition) can be realized in resource constraint and turbulent environment (Sirmon et al. 2007, Littlewood and Holt 2018). Firms entrepreneurial orientation (EO) is posited to drive resource acquisition (Huang et al. 2010). Hence, we were interested in testing the effect of EO on a firm's resource acquisition in such a setting. Besides, the study also examined the business environment effect on EO; and the direct and moderating effects of social networks (both business and social ties) on the relationship between EO-firm resource acquisition.

Prior research on the importance of EO has usually focused on the developed world context; this is surprising as SMEs play a crucial role in developing countries too. Specifically, limited literature raised the strategic importance of EO from resilience angle (Ates and Bititci 2011) and almost no research has until now empirically investigated the EO effect on firm's resource acquisition (Huang and Wang 2013). The empirical analysis made based on 408 Ethiopian SMEs filled this gap and provided general support for the proposed hypothesis.

First, this study revealed that EO plays a crucial role in the firm resource acquisition in a resource-scarce and vulnerable environment, lending empirical support for a recent debate aroused in strategic entrepreneurship mainly on the resource orchestration view (Chirico et al. 2011, Huang et al. 2010, Huang and Wang 2013, Hughes et al. 2015). Extending the idea of a resource orchestration process to EO, Huang and Wang (2013) proposed that entrepreneurs' EO capability has a substantial contribution to the process of building successful and resilient entrepreneurship. In this sense, we underpin the idea of entrepreneurial construction of the acquisition of resources.

Resource orchestration that focuses attention on these actions (Sirmon et al. 2007) has become an emerging concept grounded in resource-based theory (RBT) and strategic entrepreneurship (Hitt et al. 2011). Resource orchestration is based primarily on the conceptual work of Helfat (2007) and Sirmon et al. (2007). The resource orchestration processes (Helfat 2007, Sirmon et al. 2011) suggest that to develop business resilience in a resource demanding environment, understanding resource structuring is a key step in ROT (Sirmon et al. 2007). More specifically, how firms like SMEs acquire essential resource is the most strategic concern in resource-scarce and turbulent environment (Wang and Clegg 2018). One possible avenue firm owners may go through these actions is by developing a firm's EO capability (Miao et al. 2017). Among the three sub-processes of resource structuring, the acquisition or acquiring resources is arguably the most challenging for SMEs (Hitt et al. 2011), that requires EO attention (Huang and Wang 2013), especially for these firms operating in DCs.

The dilemma of most SMEs, especially for those operating in DCs such as in Ethiopia, is how best to facilitate their resilience capability in the face of enormous challenges including resource acquisition restrictions and continuous disruptions (Nagler and Naudé 2017, Nichter and Goldmark 2009). In this research, firstly, we found that EO becomes instrumental for firm resource acquisition in resource-scarce and hostile environments, i.e., in DCs such as in

Ethiopia. Huang and Wang (2013), drawing on the resource-based view, argued that competitive advantage could be maintained by acquiring valuable and rare resources. However, SMEs in most DCs often undertake their entrepreneurial activities at a resource disadvantage (Worku 2013). The empirical evidence we found supported that they must work to overcome it by developing and nurturing their EO capability as proposed by Huang and Wang (2013). Yet, while control of such resources is necessary for competitive advantage, entrepreneurs must take further actions to change them to better values, and that could be (hopefully) sustained over time (Crook et al. 2008).

Second, recognizing the limited knowledge about the relationship of EO, social networks, and resource acquisition constructs, we examined whether business ties and social ties have the direct and moderating role in the EO-resource acquisition relationship. As noted by Boso et al. (2013), the entrepreneurial importance of social networks has gained more attention in the scholarly literature. By emphasizing the social embeddedness of entrepreneurial activities, this study enables us to examine how these entrepreneurial processes may benefit from particular network ties, and as well as by interacting with EO how firm resource acquisition function are boosted. Findings show that both ties have a direct effect on a firm's resource acquisition processes as noted by Luo et al. (2008), although their moderating effects are different. The implication of this is that business and social ties can directly contribute to firm resource acquisition actions. However, the EO-resource acquisition relationship becomes most useful when firms maintain a high level of social relations in the context. In other words, this study confirmed, for Ethiopia, that resources generated through social ties are more vital and found to strengthen EO-resource acquisition relationship. One of the key reasons behind the latter finding is that although EO is a resource consuming entrepreneurial behaviour, diverse resources from different networks seem to be required.

We also proved the hostile and turbulent conditions are characterizing developing countries business environment have negatively influenced EO actions. The conclusion of this is that the EO influence on resource acquisition is contingent on types of social networks that possessed by entrepreneurs. Possession of higher social ties strengthens the EO-resource acquisition relationship. The circumstances in the business environments affected the EO action, and the more hostile conditions hinder the EO role for resource acquisition. Thus, the governmental and non-governmental agencies supporting SMEs development needs to focus on lessening the

hostile conditions in order to help firms use EO to acquire resources in a better way and thus enhance their resilience.

To summarize the relationship between EO, social networks, and resource acquisition. This study presented evidence that possessing more social networking support entrepreneurs to overcome difficulties related to institutional failures, transaction costs, contract enforcement, and poor regulatory conditions especially seen in most of DCs including in Ethiopia (Nichter and Goldmark 2009), hindering firms resource acquisition. Although possessing various types of social networks have direct benefits as they assist firms to acquire resources, but when they come into the relationship between EO and resource acquisition, all social networks may not equally strengthen EO actions for resource acquisition and their contributions vary in types pending on specific environment (Boso et al. 2013). This research evidenced the social ties are vital in boosting EO's for resource acquisition when compared to business ties type. As such, our study provides additional evidence to support the notion that different dimensions of social ties may have contingent values (see Bu and Roy 2015, Stam et al. 2014), highlighting the need for further research to understand the interactive role of EO and resource acquisition through networking strategies (Boso et al. 2013) in similar other settings.

Implications

SMEs are a fundamental part of the economic fabric of DCs and play a crucial role in the growth and prosperity of nations. To harness these benefit, first, their resilience is needed (Littlewood and Holt 2018). The resource structuring (especially acquisition), in the resource orchestration processes, is a first step that requires research attention to understand to maintain the resilience of these firms. This chapter studied the effect of firm's entrepreneurial orientation (EO) on resource acquisition following the call of (e.g. Huang and Wang 2013, Lumpkin and Dess 1996), and to provide insights on how to realize resource orchestration process, i.e. resource structuring (Sirmon et al. 2007).

The present study offers managerial implications. The findings revealed that possessing a high EO to enhance a firm's capacity to acquire resources from environments that may differentiate them from others who do not enjoy this resourceful advantage. Therefore, EO must be in place in the process of strategic planning when firms pursue entrepreneurial initiatives. Entrepreneurs may need to boost and develop their EO to mobilize more resources and resource-based collaborations from different sources. This is particularly important for firms operating in turbulent environments (developing countries) because they generally face a relative shortage

of internal resources and capabilities (Nagler and Naudé 2017, Nichter and Goldmark 2009). To maintain firm resilience, resources acquisition is the necessary step or processes. Hence, firm in the DCs could be able to leverage on their EO to advance firm resource acquisition strategies (Huang and Wang 2013), and thus, the EO is one of the potential ways to advance resilient entrepreneurship in the context.

Our findings also emphasize the importance of the social context in which firms enact their entrepreneurial posture and provide useful guidelines for entrepreneurs on how to cultivate specific ties and their configurational value with the EO. Generally, the findings of this study show that having both business and social ties, help firms to acquire resources, but we establish the business ties interaction and EO has no significant effect on the context. The interaction of EO and social ties increase the firm's resource acquisition, indicating too high social ties assist the effectiveness of EO. In this sense, firms that cultivate moderate ties with informal groups such as '*Iqib*' and other local associations may more benefit EO to act and put sound decisions in acquiring resources from the external environment. This implies that entrepreneurs in developing economies, especially in Ethiopia, should spend the time to cultivate social ties due to formal institutional voids. That is, by purposefully building on appropriate network configurations, in such setting entrepreneurs could benefit more from EO to acquire essential resources for the business operations.

Limitations and further research

This study has some limitations that present opportunities for future research. First, we empirically explored the role of EO using an aggregate measure of EO that involves the three dimensions of innovativeness, proactiveness, and risk-taking. However, some scholars have cautioned that these dimensions may possess differential relationships for example, with performance (Kreiser et al. 2013). Future studies could look at how these dimensions interact with one another and how they independently and collectively work in network settings. Second, social ties are measured by an entrepreneur's' subjective assessment of the extent of such social relationships. Future research should better consider the mode and content of social relations to understand the complex networking phenomena in more detail. Future research could consider more different types of social networks than just business and social ties. Moreover, future research might investigate how these ties co-evolve over time and how their dynamic interactions affect firm outcomes, including resource acquisition and firm resilience.

Finally, while our research results are based on data collected in Ethiopia, the logic that explains the EO significant actions for firm resource acquisition in the resource-scarce environment can be extended to other country settings directly, since the opportunity-ability-motivation reasons for why high EO firms may be advantaged in acquiring resources appear to apply generally. Indeed, although our research continues to support the significance of social ties for firms operating in developing economy-Ethiopia, the applicability of our findings beyond Ethiopia deserves further empirical investigation. It may be the case that social ties may also affect other developing economy contexts that have to suffer similar institutional voids, while firms in developed countries are less likely to be prominently affected by social ties to enhance their EO's resource acquisition potential. Thus, in the future, more comparative research needed to conclude the importance of social ties in other contexts and then to ascertain the generalizability of our research findings. Finally, since the having more social ties have a drawback as contains more redundant information (Burt 2002), future research needs to look the optimal level of social ties (Uzzi 1999) supporting EO-firm resource acquisition relationship.

Chapter 5

Resource Bundling and Leveraging: The Role of Entrepreneurial Orientation and Gender on Business Resilience in Turbulent, Resource-Scarce Business Environments

Abstract

If resources and capabilities are not changed or orchestrated into activities, routines, or business processes, companies are not able to become resilient, which is crucial in turbulent environments (Akgün and Keskin 2014). Two such orchestration processes are bundling and leveraging. This dynamic view of resource deployment highlights the role of entrepreneurs (Helfat 2007, Sirmon et al. 2007). In this study, entrepreneurial orientation (EO) which reflects the entrepreneur's managerial acumen and volitional act, is proposed as a driver for bundling and leveraging resources into business resilience. 'Gender' is seen to reflect the possibilities and constraints of entrepreneurs to enact their volition about female entrepreneurs' due to their social and cultural position. This resource orchestration study is conducted in Ethiopia, a developing country with typical resource constraints and the continuous threat of disruptive events, on the bases of a sample of 408 small and medium enterprises (SMEs). Our results indicate that EO is related to mobilizing resources and boosting business resilience, although hampered by disruptive conditions. Generally, the findings suggest that EO is vital to fill the gap between available resources and business resilience for companies in resource scare environments by bundling and leveraging resources. Gender moderates the relationship between EO and resources, and between resources and business resilience. These results show that female entrepreneurs are better than male entrepreneurs in bundling resources, and outperform male counterparts in boosting business resilience even though the business environment for females is harsher than male entrepreneurs in the study context.

Keywords: Resource orchestration, bundling and leveraging, entrepreneurial orientation (EO), turbulent, resource-scarce business environments

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5.1 Introduction

The resource acquisition process is a vital step but insufficient condition to achieve firm resilience. The gained resources have to be changed and orchestrated into activities, routines, capabilities, to build resilient companies, which is a pressing concern in the face of a turbulent environment (Akgün and Keskin 2014). Two such orchestration processes are bundling and leveraging (Hitt et al. 2011, and Sirmon et al. 2007). Building on acquired resources, handling the subsequently and concurrently acted management activities, bundling and leveraging of resources, are essential processes to meet the firm's unique need (Miao et al. 2017) in this case resilience²². Activities, routines, and business processes are the mechanisms through which resources and capabilities get exposed to market processes where their ultimate value and ability to generate competitive advantages are realized (Ray et al. 2004). To be able for firms to perform is thus not because of “what they are”, but due to “what they do” (Sheng et al. 2011, Sirmon et al. 2008). Similar to the resource orchestration framework's (Helfat 2007, Sirmon et al. 2007) emphasis on process-oriented and strategic conversion of scarce resources into capabilities and actions, and on the manager's role in that conversion, we argue that the orchestration of resources will vary and thus that the effects on resilience will vary (see Wong et al. 2018).

This active approach to resources is a response to the basic consideration that resources in themselves are “something a firm possesses or has access to, not what a firm is able to do” (Gröbler and Grübner 2006) or for that matter, as we may add, is able to achieve. Higher capabilities lead to a higher firm business resilience level and developing a fit between a firm's resource bundling and its leveraging strategy, is key in this (Sirmon et al. 2008). ROT incorporates thus strategy implementation issues (see Hitt et al. 2011, Sirmon et al. 2011) in its logic to link resources to a firm's performance. Hence a company becomes resilient because of “what they do” on a strategic base. Entrepreneurial orientation (EO) represents the strategic bases of ‘what they do’ to make full use of the acquired resources by companies to explore and exploit opportunities (Lumpkin and Dess 1996; Wiklund and Shepherd 2003; Miao et al. 2017). EO is a strategic act of entrepreneurs that maintain competitive advantage (Lumpkin and Dess 1996), explaining what companies do (Mar Fuentes-Fuentes et al. 2015). We propose that this

²² For multiple reasons, scholars cannot appear to agree on the definition of resilience in general business, entrepreneurship and SMEs context, as evidenced by plenty of definitions. However, there seems a shared understanding among them that term business resilience at least circles around three key organizational capability aspects: adaption, growth and performance, and seize new business opportunities (see detail chapter 2 & 3)

strategic act of EO provides a crucial driven for resources bundling and leveraging, and thus leads to higher firm performance²³ (Hughes et al. 2015, Miao et al. 2017).

Consistent with resource orchestration (Sirmon et al. 2011) we assume an indirect influence of resources on business performance, in this case, business resilience (see Miao et al. 2017) by introducing EO as a mediator between resources and resilience. According to the Resource-based View, having resources is necessary (see Barney 1991). However, this view seems not sufficient to explain resilience; insight into the way entrepreneurs orchestrate resources is of importance as well. Introducing EO in a mediating role between resources and business performance will make the explanation of the effect of resources on performance more complete (see Miao et al. 20017). With EO, a conduit is introduced through which entrepreneurs use systems of practices to direct how resources are used, i.e. understanding entrepreneur's actions to create and pursue opportunities through their risk-taking, pro-activeness, and innovativeness (Miller 1983). EO reflects an entrepreneur's mobilizing vision on resources (Chirico et al. 2011; Sirmon and Hitt 2003; Sirmon et al. 2007).

Past studies have noted that the situation in the external business environments limits EO strategic decisions (Miller and Friesen 1978). The persistence of disruptions and vulnerability level of business environments are typical features of developing countries' atmosphere (see chapter 1). As the external environment influences the company's strategy, we suggest a direct relationship between the business environment and EO (see Mozumdar 2018). Next to that, EO driven activities can be influenced by barriers present in their business environment to access basic agency elements of entrepreneurship, i.e. 'a praxis of knowing and doing of anticipating and acting' (Fuller 2000). Barriers such as their societal position can hinder women. For example, compared to men, as it controls most of their activities in society (Jamali 2009, De Vita et al. 2014, Mar Fuentes-Fuentes et al. 2015). Social norms prescribe that women are responsible for domestic activities, e.g. cooking and childcare, and these might restrict their activities outside the home (Dess and Lumpkin 2005, Akgün and Keskin 2014, Mar Fuentes-Fuentes et al. 2015, Jamali 2009, Sullivan-Taylor and Branicki 2011). Gender is then included

²³ *As there is a dearth of literature associating the EO to business resilience, in this study we considered the literature connecting EO to performance. For that reason, we interchangeably use business resilience and performance.*

as an indicator of possible societal hindrances to exert entrepreneurial activities (Mozumdar 2018).

Achieving a higher business performance requires entrepreneurs to shape their managerial activities according to the specific firm's context (Mar Fuentes-Fuentes et al. 2015). Entrepreneurship placed in a resource-deprived environment opens the question of how entrepreneurs in such an environment shape and enact their activities. The purpose of this paper is to use the resource orchestration perspective to theoretically develop and test a model in which EO mediates the relation between resources and resilience taking into account a resource-constrained and demanding environment. Despite the EO's theoretical importance for constructing resilient businesses, especially by those small and medium enterprises (SMEs) as they face enormous obstacles due to resource deficiencies, research investigating EO's mediating role in this relationship has been lacking. EO in the ROT has only recently begun to receive empirical treatments in the entrepreneurship literature (Miao et al. 2017). EO provides direction for how a firm creates more value from scarce resources and thereby fostering firm business resilience. More specifically, sparse researches have examined EO as a key (Wales 2016) for fueling for firm business resilience, especially in a vulnerable business setting in DCs.

Maintaining firms' resilience via EO driven actions is demanded; however, a paradoxical as well. From SMEs resilience demanding perspective to support economies of countries as opposed to resource scarcity situation they faced. This paradox is even stronger for SMEs which inherently have a restricted resourcing situation (Akgün and Keskin 2014, Aldrich and Auster 1986, Tognazzo et al. 2016). Particularly SMEs in DCs face the challenge of resilience as they lack strategic resources, such as skills, knowledge, and finance due to barriers related to the business environment (Worku 2013). Although the need to improve SMEs access to resources, i.e. credit services in such setting has been discussed in the literature (Duarte Alonso 2015, Alberti et al. 2018), the use of resources, which is crucial for firm business success is under-researched (Sirmon et al. 2007). Besides this knowledge gap, this research adds to the insight into resilience defined as a persistent threat (instead of a discrete event) (see chapter 2).

5.2 Theory

Overview of the conceptual model

With this research, we aim to open the "black box" (Bergh et al. 2016, Sirmon et al. 2007) of resource usage by emphasizing the role of an entrepreneur in managing the resource

orchestration processes: the bundling and leveraging. According to resource orchestration theory (ROT), entrepreneurs need to orchestrate the acquired constrained resources to realize a competitive advantage (Chirico et al. 2011). This theory was developed from the resource-based view, which posits that possessing unique and rare resources is a necessary but insufficient condition (Sirmon et al. 2007) for firm value creation processes and resilience. The resource-based view is criticized for neglecting the role of managers/entrepreneurs in recombining, coordinating and deploying resources (Sirmon et al. 2008, Sirmon et al. 2007, Sirmon et al. 2011). The ROT addresses this limitation of the resource-based view and instead proposed the managerial processes- bundling and leveraging of resources to create value (Miao et al. 2017). Bundling encompasses combining acquired resources to capabilities. Leveraging is resource mobilization whereby entrepreneurs direct resources for their particular usage (Helfat 2007, Sirmon et al. 2011). It involves among others the resources deployment actions, which is the arrangement and configuration of resources in a way that generates the superior performance desired by entrepreneurs (Sirmon et al. 2008). Deployment is dependent on the breadth of resources across the firm (Sirmon et al. 2011), and the interconnection of resources since its effects go beyond the individual effects of deploying resources (Hitt et al. 2011).

Research suggests that the combined effects of bundling and leveraging processes of resource orchestration, define the outcomes of acquired resources (Zaefarian et al. 2013). For example, Sirmon et al. (2007) note, to fully utilize resource orchestration and bolster performance, that these two processes act simultaneously and must be synchronized (Tavassoli et al. 2017). These processes are generally sequential, but in practice, each may rely upon another to convert resources into capabilities and then to values (Tavassoli et al. 2017, Linna 2013). Indeed, if they acted at the same time as they form more complex resources and capability combinations, that generate inimitable capabilities leading to higher firm performance (Tavassoli et al. 2017). Tavassoli et al. (2017) added, as a firm uses capability configurations to deploy leveraging strategies, it may need to coordinate the capabilities effectively and efficiently which results in these two orchestration processes acting synchronously. Peuscher (2016) also offered a similar idea, hence, to combine the processes and actions of entrepreneurial resource bundling and leveraging, which are supportive of understanding why firm business resilience differs.

Scholars in the strategic entrepreneurship domain have attempted to explain entrepreneurs' capabilities of resource orchestration by examining their entrepreneurial orientation (EO) (see Dess and Lumpkin 2005, Miao et al. 2017). EO represents core strategic capabilities and

competency of entrepreneurs (Lin and Tsai 2016) to run businesses in an entrepreneurial manner. EO (Lumpkin and Dess 1996) enabling firms to orchestrate resources, i.e. give insight into the processes and by that will reflect how entrepreneurs strategically operate their businesses (Wiklund and Shepherd 2005). The first step here in opening the 'black box', is investigating the active presence of entrepreneurs in giving direction to the usage of resources: from the acquired resources to achieving business resilience. The presence of the manager/entrepreneur is reflected both in their strategic capabilities, i.e., EO to effectuate the strategic direction they foresee. The gender of the entrepreneur signals the latter. For the reason that EO by its nature back-and-forth, aid firms combining and recombining existing resources in new ways to develop and commercialize new products, enables firms to reach into new markets, and service new customers (Hitt et al. 2001b). Indeed, EO stands also to represent entrepreneurs reconfiguration of processes and resources (Covin and Wales 2012). By doing this, it supports the synchronization of these processes to reach optimal resources usage (Miao et al. 2017). The bundling action is interpreted here as the level in which the acquired resources relate to the strategic orientation, i.e. EO. The leveraging activity is presented as the level to which resource based EO boosts firm business resilience. Gender, signalling entrepreneurial characteristics based on their social position which renders them possibilities and constraints to execute management actions, both moderates the relation between acquired resources and EO, and between EO and business resilience. The conceptual model aims at achieving these insights (see Figure 5.1).

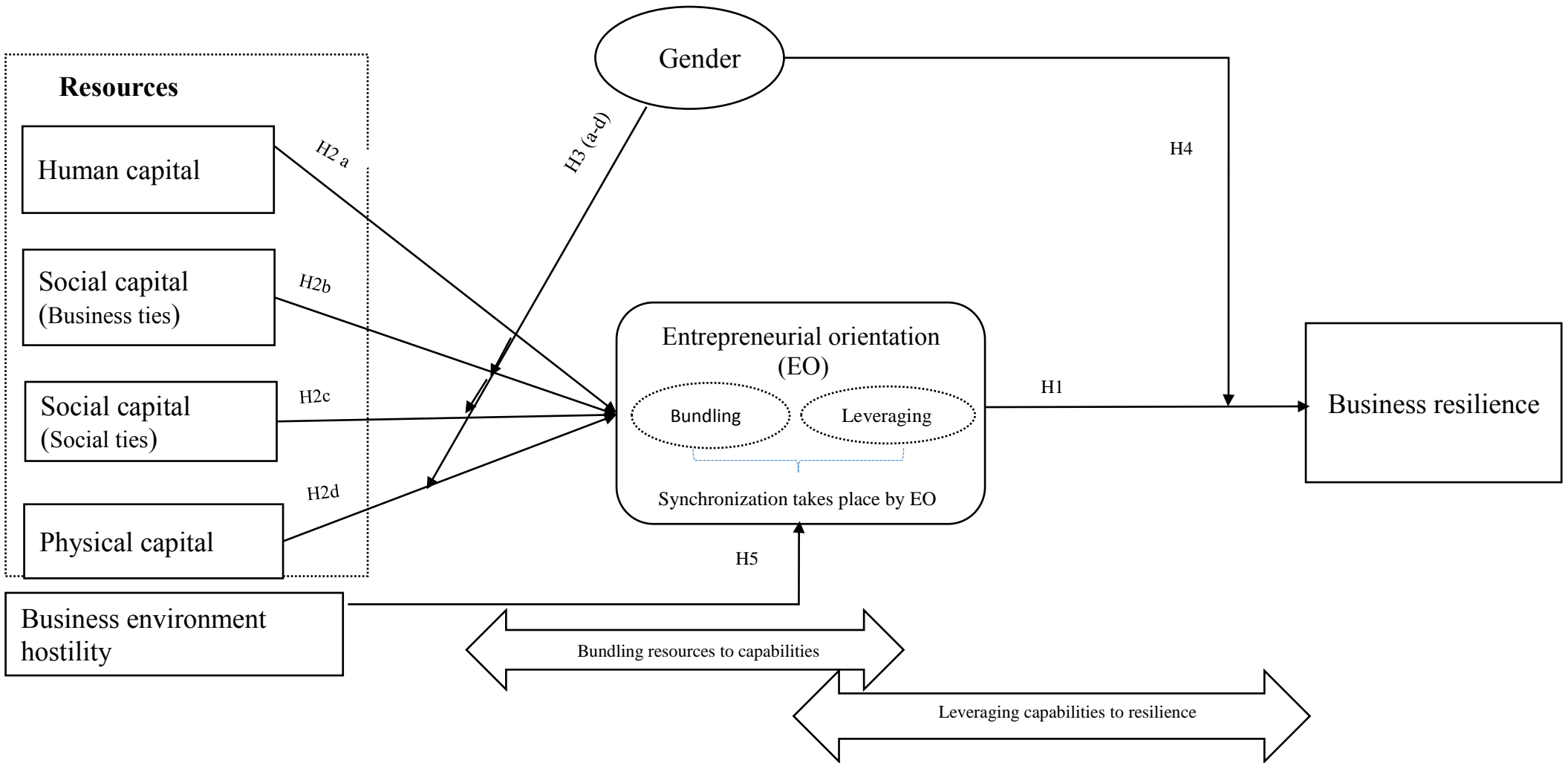


Figure 5.1. Conceptual framework

As Chirico et al. (2011) have noted, competitive advantage and resilience can be realized, when entrepreneurs can strategically orchestrate and convert constrained resources that are gained within the firm's environmental context (Lippman and Rumelt 2003, Barney 1991). EO, which involves firm processes, practices, and decision-making activities (Lumpkin and Dess 1996), will enhance firm performance by allowing a firm to make full use of its resources to exploit opportunities (Wiklund and Shepherd 2003, Wiklund and Shepherd 2005). Covin and Slevin (1989) theorized that EO consumes resources, and entrepreneur's capability to undertake entrepreneurial practices relies on its resources because resources serve as bases for all organizational actions. Hence, a firm possessing plentiful resources will have a greater ability to form an EO (Miao et al. 2017). This line of reasoning lends support to the notion, as proposed by the resource orchestration view that resources influence how strategies are implemented (Sirmon et al. 2007), which consequently influence firm resilience (Akgün and Keskin 2014, Tognazzo et al. 2016). EO is particularly useful for understanding how the in the ROT identified managerial processes, bundling and leveraging of resources, are enabled. EO, referring to how entrepreneurially a business managed by owner (Miller 1983), has been an extensively studied construct for its influence on firm's competitive advantage (Covin and Wales 2012, Akgün and Keskin 2014, Wales 2016, Wales et al. 2013).

Two approaches are used in the existing literature to understand and conceptualize EO: a firm and an individual level of conceptualization. In this study, EO is conceptualized as individual entrepreneurial and firm behaviour, actions and management methods. This is because, first, contrary to large firms, small firms can be seen as an extension of their managers as the owner-managers founded the firm, mobilize resources for business development, and exert their influence on the strategic management and direction of the organization (Miao et al. 2017). According to the well-known upper echelon theory perspective, an organization's strategic choices and subsequent outcomes are "reflections of the values and cognitive bases of powerful actors in the organization" (Hambrick and Mason 1984). In line with this perspective, EO researchers acknowledge the central role of the individual leader in the organization. Second, most firms in developing countries (which is the context of our study) are small, and it is difficult to differentiate the decisions of business owner and organization. Consistent with Miller (1983), most of the research in literature measured EO with three unique facet-innovativeness, risk-taking, and proactiveness of entrepreneurs-which act together to comprise a gestalt construct. In summary, we argue that EO has a leveraging role, instrumental for mobilizing, and as well as deploying resources for effective use (Miao et al. 2017). Hence, we

expect that firms with higher EO (through its innovative, proactive, and risk-taking decisions) are more able to transform capabilities formed to values (i.e. they able to exercise more the leveraging process) – which is an essential driver for the resilience of firms in resource-scarce and demanding environment. Thus, we hypothesized that:

H1. Entrepreneurial orientation (EO) will be positively related to firm business resilience

EO as mediator between human capital and business resilience

Human capital is one of the most critical resources that need to be mobilized for productive use (Penrose 1959). This resource is typically crucial for SMEs operating in developing countries i.e., extremely disruptive environments, where entrepreneurial activities are built upon the scarcity of experience and training thus constraining their firm performance. Human capital which includes education, experience, and training (Unger et al. 2011), may be a source of resilience as far as they are adequately bundled and leveraged as suggested by (Sirmon et al. 2011) and others. Several scholars posited human capital as one of the most critical resources that need to be invested in to advance entrepreneurial activities (Penrose 1959, Helfat and Peteraf 2003, Colbert 2004). However, empirical research on the relationship between human capital and business success has been mixed. Results of RBV research (see Crook et al. 2008) show that out of 33 studies identified by Newbert (2007), only 11 support the notion that human capital is positively and significantly related to firm performance. One explanation for this contradictory evidence is that the relationship between human capital and firm success can be both direct and indirect (Hitt et al. 2001a), indicating that our understanding of the association of human capital and firm performance remains yet underexplored.

Following the EO role in resource orchestration (Miao et al. 2017, Sirmon et al. 2007), we suggest an indirect effect of human capital on firm business resilience (i.e., EO act as a mediator between entrepreneur's human capital and firm business resilience). As per the argument of resource orchestration proponents, possessing resources such as human capital (Sirmon et al. 2007, Sirmon et al. 2011) is essential, but not an adequate condition to advance firm resilience. Beyond acquiring these resources, there is the need to understand how entrepreneurs orchestrate them to unlock competitive advantage(s) and better outcomes (Miao et al. 2017). This view reflects the traditional concept of strategy which posits that resource position is a starting point where strategy is developed (Akgün and Keskin 2014, Hitt et al. 2001b). The RBV and its extensive resource orchestration view, therefore, lend support to the theoretical conclusion that

human capital represents a firm's initial resource endowment that managers may use to mould a firm's strategic orientation (Andrews 1971).

Human capital resources are posited to advance strategic orientation of entrepreneurs (Miller and Friesen 1978). For example, higher education attainment creates an expanded knowledge base, which influences the likelihood of innovative behaviour (Manev et al. 2005) positively. Also, education and experience in the entrepreneurship literature widely noted that it could improve the odds of taking calculated risks in business operations. The development of specific knowledge (e.g., education, experience, and training), as one type of human capital, constitutes a foundation for EO functioning because they provide the basis for EO including developing innovative and proactive business strategies, influencing the quality of decision-making, and improving odds of successful risk-taking (Cooper et al. 1989). EO becomes an essential enabler for building firm resilience capability (Akgün and Keskin 2014). The ultimate purpose of EO is to pinpoint which resources are necessary to promote firm business resilience. Hence, EO increases a firm's ability to differentiate necessary resources to innovate (Huang and Wang 2013), thus boosting the likelihood of higher firm resilience. Based on the reasons discussed above, we offer the following.

H2a. Human capital will be positively related to EO, and EO mediates the positive relationship between human capital and firm business resilience.

EO as mediator between social capital and business resilience

Social capital (SC) has gained prominence over the last few decades, showing the benefits derived from the firm's position in a social network. In the work of Nahapiet and Ghoshal (1997) SC or social network defined as “the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit”. SC is fundamental to a firm's success. It serves as channels to information and innovative ideas (Nichter and Goldmark 2009). It also facilitates inter-unit resource and innovation exchange, supports the creation of intellectual capital, the formation of new ventures, supplier relations, regional production networks, and inter-firm learning (Adler and Kwon 2002, Adler and Kwon 2000). Harnessing social capital, as a strategy to acquire knowledge, allows organizations access to external knowledge, strengthens the willingness and ability of exchange partners, helps in gaining knowledge resources from exchange partners, and thereby enhances the breadth, depth, and efficiency of mutual knowledge exchanges (Biggs

2011). Particularly for firms facing a resource-scarcity, market failures and a weak institutional setting (Nichter and Goldmark 2009), social capital becomes imperative to build strong social capital to search for complementary external resources, to increase information flow, and to establish trust with exchange partners, thus facilitating social exchange and reducing transaction costs (Davidsson and Honig 2003). Consistent with this, a recent meta-analysis made by Stam et al. (2014) confirmed a significant and positive relationship between social capital and firm performance. The finding indicates the existence of a direct connection of social capital on firm performance.

On the other hand, in line with Miao et al. (2017) finding, social capital (SC) may also indirectly influence firm performance through EO which drives the usage of the resource. In other words, EO as entrepreneurial strategic posture, representing a propensity to innovate (Covin and Slevin 1989, De Clercq et al. 2010), may mediate the relationship between social capital and firm resilience. As previously noted SC represents the capacity to access resources via social connections (Manev et al. 2005). As a source of firm resources like human capital, SC may also need to be converted, transformed, and institutionalized into actions (Wright et al. 2012) to consolidate firm resilience. Like human capital, however, SC is necessary, but not sufficient, to create competitive advantage leading to above-average returns. SC, indicated by high-quality relational resources that reside in interactions among exchange partners, places a firm in a context that is particularly conducive for generating new ideas and knowledge (De Clercq et al. 2010), that entrepreneurs may use to mobilize the exploitation of opportunities and thus to enhance firm resilience. Further to this, firms operating in a resource constraint environment need sufficient resources to harness innovative ideas and to facilitate entrepreneurial experimentation (Covin and Wales 2012).

As Covin and Slevin (1989) theorized, EO hinges on resources (e.g. SC) because of its resource-consuming actions and being an entrepreneurial capability to engage in entrepreneurial behaviour. Resources are as such the bases for all organizational operations (Sirmon et al. 2007, Sirmon et al. 2011). Therefore, a firm with ample social capital resources tends to have a higher capacity to undertake proactive, innovative activities and as well willingness to take a risk (i.e., EO), which consequently results in high firm resilience (Ates and Bititci 2011). It is important to note, however, although SC may be the conduit through which external knowledge and resources are obtained, this can only occur when entrepreneurs direct SC for that purpose, which is key to resource orchestration (Sirmon et al. 2011). Various classifications of SC or social

networks exist in the literature. Following the previous chapter discussion (see section 4.2), we classified SC into business and social ties. Based on these classifications, we offer the following hypothesis:

H2b. Business ties will be positively related to EO, and EO mediates the positive relationship between business ties and firm business resilience.

H2c. Social ties will be positively related to EO and EO mediates the positive relationship between social ties and firm resilience.

EO mediates physical capital and business resilience

Realizing entrepreneurial strategy implementation requires mobilizing diverse resources and their effective usage (Penrose 1959). Consistent with ROT (e.g. Sirmon et al. 2007), we argue that firms with more physical resources can implement entrepreneurial-oriented strategies, practices, and decisions better than counterparts. Firms with adequate physical resources do not need to choose better strategies that are less than optimal, but cheaper to implement. For example, Tognazzo et al. (2016) asserted that firms that can mobilize sufficient assets such as technologies and machinery, can choose strategic options that are more resource demanding, but that ultimately provide greater business success (Nichter and Goldmark 2009). Possessing the right technologies and machinery assist EO effectiveness, which is a resource consuming and demanding activity (Covin and Slevin 1989). Characteristically, most SMEs in developing countries face difficulties in obtaining physical resources such as technologies, that put severe limits on their growth (Nagler and Naudé 2017, Nichter and Goldmark 2009). This is contrary to the expectation that these firms are supposed to play a crucial role in promoting employment. Mobilizing adequate physical resources to provide SMEs in DCs a chance to exercise and experiment with new strategies and innovative actions that are crucial to fostering firm development. Given that, bundling and leveraging physical resources is required to execute and improve entrepreneurial-oriented strategy that can foster the process of creating resilient companies. Thus, we hypothesize:

H2d. Physical capital will be positively related to EO, and EO mediates the relationship between firm physical capital and firm business resilience.

Gender differences

Critiques noted that female-owned entrepreneurial activities are less strategic oriented (Brush et al. 2009) when compared to male counterparts. This is an especially big concern in many developing countries (De Vita et al. 2014). An increasing number of females' join entrepreneurial activities worldwide over the last few years (Minniti and Naudé 2010). Given the important role that female entrepreneurs take in the economy, understanding gender differential towards EO driven actions, e.g., bundling and leveraging), is an interesting topic (De Bruin et al. 2007). The gender differences in EO actions may present, because of the social position of females entrepreneurs, hindrances in accessing resources in communities (Hansen et al. 2011, Lim and Envick 2013). Of course, the magnitude of the societal effect on females-derived entrepreneurial activities varies from society to society (De Bruin et al. 2007). In traditional societies, which is the characteristic of most DCs, the social and traditional culture constrain women entrepreneurial activities. In most of the DCs, women when compared to men counterparts are mostly occupied by domestic activities and thus have less chance to improve and develop their EO's practices and methods. Meaning, they are supposed to be less able to bundle (i.e. mobilize) and leverage resources (efficiently uses) in a unique way, than male counterparts.

The difference in EO driven resources orchestration between males and females can be examined from two different perspectives (Goktan and Gupta 2015). The first, feminist theory perspective, defines males and females as “essentially different” whereas the second, social constructionist perspective, focuses on masculine and feminine qualities rather than the biological distinction between males and females (Ahl 2006). Sex, a biological and largely immutable property of individuals, often serves as a highly visible, dichotomous, and ubiquitous marker to categorize people (Ridgeway 2001). The social constructionist perspective, on the other hand, focuses on masculinity and femininity. This perspective views the gender as qualities of people that are based upon commonly held cultural definitions of male and female (Runyan et al. 2006). This study considered a combination of perspectives in defining gender difference in resources leading to variation in EO driven actions among females and males entrepreneurs.

A study argued that there are no gender differences among women and men entrepreneurs on the possession of EO and its practical usage (Goktan and Gupta 2015). For example, Esnard-Flavius (2010) study showed that women were just as likely to display the same EO dimensions

as men were. Likewise, Bird (1993) research confirmed strong similarities between men and women in their desire for autonomy, control, and achievement, which are qualities, associated with entrepreneurship. However, Cetindamar et al. (2012) pointed to Bird's research, noting that the knowledge, skills, competencies, and other attributes relevant to entrepreneurial activities, are unevenly distributed across males and females. A study by Shinnar et al. (2012), reported that women compared to men that they expect less support for entrepreneurial activities, such as receiving cooperation from family members and financing from lenders. In many countries, firms owned by females are less able to mobilize physical and human capital than male-owned firms (Marlow and Patton 2005). Men and women also differ in the degree of development of their social capital (SC), categorized into business and social ties (Goktan and Gupta 2015, Runyan et al. 2006, Manolova et al. 2007). The ties in which entrepreneurs are embedded influence their ability to access scarce resources needed to operate and find new business opportunities (Cetindamar et al. 2012). Generally, while prior research widely noted the gender differences in resources and the EO role in mobilizing them (e.g. Shinnar et al. 2012), the relation between EO and resource orchestration, specifically in a resource constraint setting, is less researched (Wales et al. 2013). Besides, female entrepreneurship has been understudied in a hostile and resource-constrained environment (Minniti and Naudé 2010, Mozumdar 2018). Therefore, we test the assertion that EO resource orchestration is higher among men compared to women in resource-scarce and turbulent business environment, i.e. developing countries like Ethiopia. Thus, we derive the following hypotheses:

H3a: The relationship between human capital and EO will be stronger for male than women.

H3b: The relationship between SC (business ties) and EO will be stronger for male than women.

H3c: The relationship between SC (social ties) and EO will be stronger for male than women.

H3d: The relationship between physical and EO will be stronger for male than women.

Gaining access to resources is noted to be insufficient to attain firm resilience. Thus entrepreneurs need to convert them into values, using the leveraging process (Hughes et al. 2015, Hitt et al. 2011). EO influences leveraging activities (Hughes et al. 2015, Miao et al. 2017). EO leverages resources to values by activating, implementing, and directing decision-making, practices, and methods (Lumpkin and Dess 1996). However, there may be differences

because of gender in this EO driven actions. Since women are constrained to mobilize and access resources due to social and traditional conditions, we also expect that they put a constraint in EO resource leveraging processes as compared to male counterparts. Brush et al. (2009) asserted this idea, by stating that a gender-aware framework of women entrepreneur is needed because compared to men women enterprises are supposed to be less strategic and entrepreneurial oriented. This consequently may result in their business to a higher failure rate. This problem appears explicitly more threatening for women in DCs, as the business in the setting is full of turbulent situations. Hence, we expect the following:

H4: The relationship between EO and business resilience is stronger for men than women entrepreneurs in a turbulent, resource-scarce business environments.

Business environment hostility and EO

EO role on resource bundling and leveraging are highly dependent on the business environment (Eisenhardt and Schoonhoven 1990). A continually disrupting environment limits EO strategic importance on bundling and leveraging of resources (Miller 1983, Miller and Friesen 1978). A study pointed out that a harsh business environment may require a strategic discipline (Porter, 1980) as wrong strategic decisions could even endanger the survival of a firm. This effect of business environment on EO may vary from context to context. This effect is more severe in DCs because such setting is characterized by frequent and complex nature of turbulences. The regulatory and institutional environment of DCs- are notoriously burdensome when compared to developed countries-frequently hampering strategic actions and decisions of entrepreneurs (Nichter and Goldmark 2009). Therefore, for EO to perform well in DCs, firms need to adopt low-risk taking and strategic experimentation orientation. A lack of opportunities and resources also generally characterizes this environment. For example, a firm that engages in a product innovation strategy under the condition of a resource-constrained setting may fail because innovation demands technologies to meet that demand (Zahra 1991). In short, we argue that the business environment in DCs is negatively influencing firms' EO and, thus, in turn, lower their resilience. The above arguments lead to the following hypothesis:

H5: The business environment hostility in the DCs negatively affect EO actions (i.e., on EO driven resources bundling and leveraging practices).

5.3 Methods

Study setting, sample, and data collection

The purpose of this study is to examine the mediating role of EO in resource bundling and leveraging processes thus to construct firm business resilience in a turbulent, resource-scarce environment of developing countries. The data used for this study were gathered from non-farm SMEs included in the 2016 (OCSSCo²⁴ and Wasasa²⁵) database operating in the East Shewa and Arsi provinces in Ethiopia. The detailed study setting, sampling, and data collection methods are elaborated in chapter 1 (see section 1.4, Methodology).

Measures

For the measurement of EO, SC (business ties), SC (social ties), and business environment hostility refer to section 4.3. Detailed operationalization of the constructs is presented in Table 5.1, in Appendix F. The remainder of the variables will be presented as follows.

Business resilience

The construct of business resilience constituted three capability dimensions: adaptability (adaptation), growth (performance increase), and the ability to seize business opportunities amid disruptions (see detail in chapter 3).

Human capital

The human capital construct comprises three items: educational level, employment and managerial experience possession of entrepreneurs. While the Likert scale measures the educational level, employment and managerial experience measured with dichotomous (No/yes response) answer categories.

Physical capital

The total assets that a firm owned represented the physical capital resource in this study. The logarithms of the total asset are considered.

Moderator Variable

We examine the effect of one moderator variable, the gender of the firm owner. The firm owner-reported gender. It was coded as a binary/dummy measure, where the female ($X = 1$) and male ($X = 0$).

²⁴ Oromia credit and saving share company (Governmental affiliated company-micro finance bank)

²⁵ Wasasa (Private company-micro finance bank)

Control variables

Consistent with earlier research, businesses of different firm size and age may exhibit different organizational and environmental characteristics, which in turn may influence the firm's resilience. Therefore, these variables were included as controls. First, we measured firm size using the number of employees. We asked respondents how many individuals worked in the firm on average each year, from 2013-2016 and expected to work for their firms in 2017, including working owners. Then we calculated the mean value of 5 years. This mean value of 5 years was transformed using the natural logarithm to obtain a normal distribution. Second, respondents were asked the number of years since the firm was started. Similarly, the value obtained was transformed using the natural logarithm to obtain a normal distribution.

Data analysis

This study employs structural equation modelling (SEM) with partial least squares (PLS). PLS-SEM method was relevant for the present study for three reasons. First, the method allowed us to pursue our research objectives because it was predictive in nature (Hair et al. 2012). Second, it enabled us to observe complex causal relationships (Hair et al. 2012). The model in this study has six constructs (human capital, business ties, social ties, entrepreneurial orientation (EO), business environment, and business resilience) and their relationships. We also considered the control variables: firm age and size. In such scenarios, the model allows researchers to consider a different model element to be more flexible (Sarstedt et al. 2014) because "PLS is primarily intended for causal predictive analysis in situations of high complexity but low theoretical information" (Jöreskog and Wold 1982). Third, PLS has higher statistical power than common maximum-likelihood covariance-based SEM methods (Reinartz et al. 2009) because PLS is less demanding in terms of the minimum sample size (Henseler et al. 2012). In this study, the sample is small, so the lenient requirements for minimum sample size constitute an additional advantage of PLS. The data analysis used SmartPLS software v. 3.2.7 (Ringle et al. 2015).

5.4 Results

Table 5.2 Descriptive statistics

Constructs/Variables	Mean	S.D	1	2	3	4	5	6	7	8	9
Business_resilience	5.21	1.08	1								
EO	5.49	0.95	0.54**	1							
Human_Capital	2.10	1.14	0.19*	0.17*	1						
Physical_Capital	338.3 ²⁶	2677.3	0.21*	0.19*	0.1	1					
SC_business ties	5.60	1.24	0.45**	0.43**	0.19*	0.1	1				
SC_socialties	4.77	1.32	0.29**	0.12	0.11	0.20	0.29**	1			
Business_environment_hostility	4.87	1.28	-0.19*	-0.21*	0.01	-0.10	-0.10	-0.20	1		
Firm_size	4.04	4.36	0.30**	0.37**	0.2	0.34**	0.22*	0.10	-0.18*	1	
Firm_age	4.86	4.23	-0.1	0.04	0.01	0.1	0.0	0.0	0.0	0.0	1

Significance level: ***p < 0.01 **p < 0.05 *p < 0.1

Table 5.2 presents the results of the descriptive statistics and the correlation matrix. The results indicated that the mean of the SC_business ties is higher, with the mean value of 5.6, whereas for Business_resilience, EO, SC_socialties, and business_environment_hostility constructs, the mean scores were 5.3, 5.5, 4.8, and 4.8, respectively. The mean score of physical capital was reported in Ethiopian currency (Birr), which amount to 338.3 birr. Correlations between business resilience and EO, and business resilience and SC-business ties are also quite significant. This results indicate the presence of a relationship among these variables. The average size of the participating firms was about 4 employees. Among the sampled firms, 50 percent had below 3 employees, 48 percent had 3-100 employees, and 2 percent had above 100 employees.

²⁶ The physical_capital amount is reported in (x1000). Currency used is Ethiopian birr. Exchange rate in the 2016 year: Average 1 US dollar= 22 Ethiopian birr.

Whether the firm is characterized as “small”, “medium” or “large” is not straightforward and depends on the industry in which it competes. However, it is reasonable to argue that in an Ethiopian context, some of the firms in the sample, particularly those that exceed 100 employees, are considered large firms. The weight of the sample skews toward SMEs, as this category constitutes 98 percent of the total sample.

To ensure the scales were valid and reliable, we followed the steps proposed by Barclay et al. (1995): (1) Evaluation of the measurement model, and (2) Evaluation of the structural model.

Evaluation of the measurement model

Following Hair et al. (2012) recommendations, the first step was to analyze the factor loadings, composite reliability, and average variance extracted (AVE). Table 5.3 present the values for these indicators. All values for these indicators exceeded the thresholds recommended in the literature (Bagozzi et al. 1991, Gefen et al. 2000, Carmines and Zeller 1979, Fornell and Bookstein 1982, Akgün and Keskin 2014). Akgün and Keskin (2014) recommend values greater than 0.5 for the factor loadings, and (Fornell and Bookstein 1982) recommend values greater than 0.7, and 0.5 for the composite reliability and average variance extracted (AVE), respectively, endorsing the reliability and validity of the measures.

Next, we evaluated the discriminant validity of the measures. The discriminant validity test measures the extent to which a construct differs from another construct. To test the discriminant validity, we followed two approaches. First, the Akgün and Keskin (2014) criterion are used to test whether the square root of a construct's AVE is higher than the correlations between it and any other construct within the model. Second, the factor loading of an item on its associated construct should be higher than the loading of another non-construct item on that construct. Table 5.4 shows the result of this analysis and reports the latent variable correlation matrix with the AVE on the diagonal. The illustrated results suggest no evidence of multicollinearity. Hence, we conclude that the measurement model reveals a good discriminant validity and meets the Akgün and Keskin (2014) criterion. In Table 5.5, the cross-loadings report is presented. Moving across the rows in this table reveals that each item loads higher on its particular construct than on any other construct. The report further verifies discriminant validity.

We checked if there is a multicollinearity problem by examining the tolerance values (VIF) (Hair et al. 2012). We assured that the values meet the threshold value of 5.0 and indicate no multicollinearity problem. We also evaluated model fit using the standardized root means square residual (SRMR) indices. The SRMR is an absolute measure of fit and is defined as the standardized difference between the observed correlation and the predicted correlation (Hair et al., 2012). To complete the analysis of the measurement model, we calculated the goodness of fit of the model using the SRMR (Henseler et al. 2012). The recommended value of SRMR is <0.08 set by Henseler et al. (2012), and we found our model within the threshold (0.078).

Furthermore, we tested the presence of common method variance (CMV) based on the Hermon statistical analysis approach. The test was conducted using SPSS software. To conduct the Hermon statistical analysis, we take all items into an exploratory factor analysis (EFA). The test threshold is that the unrotated first factor should be less than 50% (Podsakoff and Organ 1986). We ensured that the CMV is not a problem as the Hermon test value is 39.4%, which is less than the 50% threshold.

After verifying the reliability and validity of our measures, in the next section first, we present the results of path relationships in the structural model. Then, the multigroup analysis is conducted to uncover gender differences in EO.

Table 5.3: Items Loading, Internal Consistency, and AVE

Constructs	Items measuring construct	Outer loadings	Composite reliability	AVE ²⁷
Business resilience	AD1	0.82	0.95	0.64
	AD2	0.82		
	AD3	0.75		
	AD4	0.81		
	Opp1	0.82		
	Opp2	0.86		
	Opp3	0.79		
	P1	0.76		
	P2	0.79		
	P3	0.76		
	P4	0.82		
	Entrepreneurial orientation (EO)	EO_I1		
EO_I2		0.75		
EO_I3		0.84		
EO_I4		0.78		
EO_P1		0.8		
EO_P2		0.83		
EO_P3		0.8		
EO_R1		0.81		
EO_R2		0.78		
EO_R3		0.81		
Human capital		Educational level	0.79	0.75
	Employment experience	0.66		
	Managerial experience	0.67		
Physical capital	Investment (log)	1	1	1
Social capital (Social Ties)	With ROSCAs ²⁸	0.75	0.73	0.58
	With other local cooperatives & associations	0.77		
Social capital (Business Ties)	With suppliers	0.91	0.94	0.83
	With customers	0.91		
	With other firms/competitors	0.91		
Business environment hostility	Business support /institutional voids problems	0.55	0.76	0.52
	Infrastructural hurdles	0.75		
	Market access-related challenges	0.83		

²⁷ AVE = average variance extracted.

²⁸ Rotating savings and credit associations which is also named in Ethiopia as 'Iqqib'

Table 5.4. Fornell-Larcker Criterion - Discriminant Validity (for constructs)

Constructs	Business environment hostility	Entrepreneurial Orientation (EO)	Human capital	Physical capital	Business resilience	Social capital (Business ties)	Social capital (Social ties)
Business environment hostility	0.72	-					
Entrepreneurial orientation (EO)	-0.23	0.80	-				
Human capital resources	-0.18	0.36	0.71	-			
Physical capital resources	-0.26	0.38	0.29	1.00	-		
Business resilience	-0.20	0.61	0.28	0.36	0.80	-	
Social capital (Business ties)	-0.08	0.54	0.23	0.24	0.56	0.91	-
Social capital (Social ties)	-0.19	0.32	0.14	0.23	0.36	0.42	0.76

Table 5.5: Items cross-loadings

Constructs/ Variables	Items	EO	Human capital	Physical capital	Business resilience	Business ties	Social ties	Business environment hostility	Firm age	Firm size
Business resilience	AD1	0.50	0.22	0.26	0.82	0.51	0.31	-0.08	0.11	-0.02
	AD2	0.49	0.20	0.23	0.82	0.42	0.22	-0.15	0.16	0.01
	AD3	0.42	0.13	0.20	0.75	0.41	0.27	-0.10	0.13	0.01
	AD4	0.50	0.22	0.21	0.81	0.45	0.26	-0.10	0.14	0.03
	Opp1	0.49	0.25	0.24	0.82	0.48	0.29	-0.11	0.11	0.08
	Opp2	0.53	0.27	0.27	0.86	0.45	0.25	-0.14	0.08	0.02
	Opp3	0.45	0.22	0.25	0.79	0.39	0.24	-0.20	0.08	0.06
	P1	0.48	0.26	0.41	0.76	0.43	0.34	-0.22	0.13	0.16
	P2	0.53	0.24	0.38	0.79	0.46	0.34	-0.20	0.15	0.17
	P3	0.48	0.23	0.37	0.76	0.39	0.34	-0.27	0.15	0.14
Enterpreneurial orientation (EO)	EO_I1	0.80	0.32	0.39	0.51	0.40	0.27	-0.27	0.14	0.18
	EO_I2	0.76	0.22	0.30	0.42	0.33	0.27	-0.09	0.17	0.20
	EO_I3	0.84	0.33	0.40	0.55	0.46	0.29	-0.26	0.18	0.21
	EO_I4	0.78	0.30	0.30	0.51	0.39	0.27	-0.22	0.14	0.16
	EO_P1	0.80	0.28	0.28	0.49	0.47	0.26	-0.11	0.08	0.14
	EO_P2	0.83	0.29	0.28	0.51	0.50	0.27	-0.16	0.10	0.18
	EO_P3	0.80	0.23	0.24	0.48	0.41	0.22	-0.17	0.11	0.12
	EO_R1	0.81	0.27	0.30	0.52	0.50	0.28	-0.17	0.08	0.19
	EO_R2	0.78	0.29	0.26	0.46	0.40	0.20	-0.17	0.06	0.19
EO_R3	0.81	0.32	0.25	0.46	0.41	0.24	-0.19	0.03	0.18	
Human capital	Edu_level	0.33	0.78	0.26	0.33	0.23	0.06	-0.09	-0.18	0.13
	Experi_emplo	0.18	0.66	0.19	0.12	0.11	0.14	-0.15	-0.08	0.10
	Experi_mgmt	0.21	0.67	0.13	0.09	0.10	0.14	-0.17	-0.02	0.08
Business environment hostility	Business support (Institutional voids problems)	-0.06	-0.07	-0.20	-0.04	0.03	-0.10	0.55	-0.08	-0.14
	Infrastructures challenges	-0.17	-0.18	-0.11	-0.12	-0.06	-0.13	0.75	-0.06	-0.11
	Market access hurdles	-0.21	-0.12	-0.26	-0.21	-0.09	-0.18	0.83	-0.16	-0.12
Physical capital	Physical capital (Log)	0.38	0.29	1.00	0.36	0.24	0.23	-0.26	0.19	0.38
Social capital (Social ties)	ROSCAs	0.24	0.07	0.20	0.24	0.24	0.75	-0.14	0.08	0.05
	Other local cooperatives & associations	0.25	0.14	0.16	0.31	0.40	0.77	-0.16	0.04	0.11
Social capital (Business ties)	Ties-suppliers	0.52	0.23	0.22	0.51	0.91	0.39	-0.14	0.07	0.07
	Ties_customers	0.49	0.24	0.24	0.53	0.91	0.41	-0.10	0.05	0.09
	Ties_with_other_firms (competitors)	0.44	0.14	0.19	0.48	0.91	0.35	0.02	0.08	0.07
Control variables	Firm age	0.14	-0.15	0.19	0.15	0.07	0.08	-0.15	1.00	0.10
	Firm size	0.22	0.15	0.38	0.08	0.08	0.11	-0.16	0.10	1.00

PLS Structural Equation Model Analysis

Figure 5.2 presents the visual representation of the structural equation model results while Table 5.6 shows detailed results of the relationships between variables, path coefficients, S.D, t-values, decision, and R-squared. The significance of the path coefficients was determined via a bootstrapping procedure, where the sample size was increased to 5000. The results show the presence of a positive and statistically significant relationship between the human capital (t value=5.87, p < 0.01), social capital (business ties, t value=10.496, p < 0.01), and physical capital (t value=2.13, p < 0.05) resources, and the EO. Thus, hypothesis H2, H3, and H5 are supported. Our results also provide support for Hypothesis 1; EO has a positive effect on firm business resilience (t value=14.26, p < 0.01). The results support the hypothesis 4 at 10% significant level that positive relationship found between social ties (t value=1.80, p < 0.1) and the EO practices and actions. Moreover, results also suggested that the business environment disruptions (t value=3.07, p < 0.01), is statistically significant and negatively related to EO, indicating that the business environment is negatively affecting EO. The firm age has a positive effect on firm business resilience (t value=2.05, p < 0.05) in the context.

Table 5.6: Path Coefficients and Significance Testing

Hypothesis	Paths	Path coefficients	S.D	T-values	Decisions	R ²
Control variables	Firm age -> business resilience	0.08	0.04	2.05**	-	38
	Firm size -> business resilience	0.03	0.04	0.85	-	
H1	EO -> business resilience	0.60	0.04	14.26***	Supported	40
H2a	Human capital -> EO	0.22	0.04	5.87***	Supported	
H2b	SC (Business ties) -> EO	0.44	0.04	10.50***	Supported	
H2c	SC (Social ties) -> EO	0.08	0.04	1.80*	Supported at 10%	
H2d	Physical capital -> EO	0.08	0.04	2.13**	Supported	
H5	Business environment hostility -> EO	-0.14	0.04	3.07***	Supported	

Notes: *** p< 0.01; **p < 0.05; and *p < 0.1.

Figure 5.2 shows the pictorial representation of the results of the model

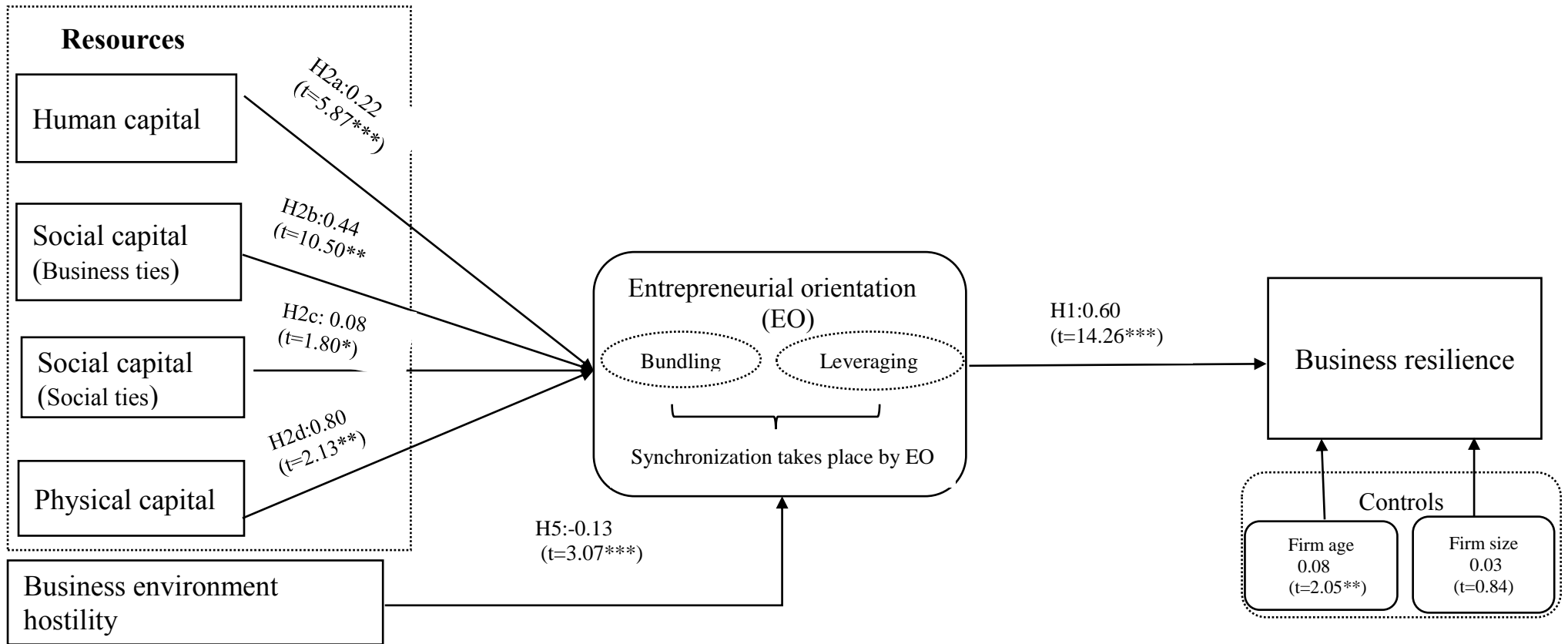


Figure 5.2: Results of the PLS Model

Gender differential effect: multigroup Analysis

Using the multigroup analysis, we investigated if there is a gender difference present between resources, EO, and EO-firm business resilience among female and male entrepreneurs in the study context. A multi-group analysis follows the testing of the structural model. In PLS-SEM, the measure of the difference between different groups was interpreted based on the comparison of path estimates between the groups (Lee et al. 2013). In some cases, however, even small differences in coefficients show a significant value. Therefore, identification of the distance between coefficients is recommended (Garson David 2016). There are three methods (Sarstedt et al. 2014) of the testing the significance of differences (i.e., PLS-MGA, Parametric, and Welch-Satterthwait tests). While the PLS-MGA is non-parametric significance test, the parametric test is a similar method to PLS_MGA but is parametric, assuming that groups have equal variances. The Welch-Satterthwaite test is an alternative parametric test, assuming unequal variances between groups. It is noted that compared to others (Sarstedt et al. 2011), the PLS-MGA is the most conservative and often used test, and thus adopted for this study to compare gender difference. According to this test a difference to be significant needs the p-value to be smaller than 0.05 or larger than 0.95 for the difference of group-specific path coefficients (Sarstedt et al. 2011). This method (see Henseler et al. (2009)) is an extension of the original nonparametric Henseler's MGA method as described, for example, by Sarstedt et al. (2011), and is the most commonly used test. The results are presented in Table 5.7 below.

Table 5.7: Path Estimates of Gender Differences in Relationships between the Influence of Different Types of resources to EO and EO to business resilience

Hypot hesis	Path	Path Coefficients (standardized values)		T-Values		Path coefficients comparisons on results	PLS-MGA test		Decisions
		Females (N=201)	Males (N=207)	Females (N=201)	Males (N=207)		Path Coefficients -difference (F - M)	p-Value (F vs M)	
H3a	Human capital -> EO	0.24	0.14	3.97***	2.17**	F>M	0.11	0.08	Not supported at 10%
H3b	SC_Business ties -> EO	0.42	0.39	7.34***	6.18***	F>M	0.03	0.35	NS (Not supported)
H3c	SC_Social ties -> EO	0.12	-0.02	2.03**	0.45	Male NS	0.15	0.05	Not supported
H3d	Physical capital -> EO	0.10	0.24	1.77*	4.42***	M>F	0.14	0.95	Supported
H4	EO -> Business resilience	0.64	0.50	13.75***	8.2***	F>M	0.13	0.05	Not supported

Note: M=Males, F=Females, NS=Not significant. P values in italics indicate difference in significance. * p< 0.1; ** p< 0.05; *** p< 0.01; and P >0.95 significant.

As you can see in Table 5.7, PLS-MGA test results indicated statistically significant differences between the path coefficients of men and women in resources bundling (except business ties resource) and resources leveraging process instrumentalized by EO. Specifically, examining the p-value columns, the difference is significant in four relationship— namely human capital (at $p < 0.1$), social ties, and physical capital (at $p < 0.05$) to EO, and EO (at $p < 0.05$) to business resilience. We found that H3a, H3c, and H4 were not supported. We confirmed significant differences. This means that women's human capital and social ties more strongly boost their EO compared to male entrepreneurs. Women's EO also more strongly influences business resilience compared to their male counterparts. On the other hand, male's physical capital boosted more strongly EO than women's physical capital (H3d). For the relation between business ties and EO, we did not get a significant result meaning that in this respect there is no significant difference between men and women.

Concerning the perceptions of the business environment by males and females, the indication is that female entrepreneur perceive the business environment as more hostile to their entrepreneurial activities than men do. By connecting to the previous results, we inferred that in the study context female entrepreneurs are more able to mobilize human capital and social ties resources as compared to male counterparts. They are also found to be in a better position in EO utilization for changing capabilities to values i.e. firm resilience. This despite facing more hostility conditions from business environments they operate in.

5.5 Discussion and conclusions

Gaining access to valuable, rare, and inimitable resources are not enough to achieve firm resilience. Instead the acquired resources need to be efficiently and effectively used (Sirmon et al. 2011, Helfat 2007). The usage is divided into two according to ROT, i.e., bundling and leveraging (Hitt et al. 2011). Entrepreneurs, specifically in this research, their EO, drive this usage of the acquired resources. EO represents the managerial and volitional act of entrepreneurs (Miao et al. 2017). This study was motivated to identify the role of EO as mediation between resources and resilience. Identifying the active role of EO indicates that not only resources themselves but also the entrepreneurial usage of those resources leads to resilience. EO takes then a resource mobilization and usage role (Chirico et al. 2011) leading to a higher firm business resilience. Hence, in this

chapter, we tested a model in which EO mediates the relationship between firms various types of resources and firm resilience.

The present study provides answers to the inconsistent research results on the relationship between resources and firm outcomes, i.e. firm business resilience, in the existing literature. Findings show that EO mediates the relationship between various firm resources and business resilience. This mediation effect accounts for at least part of the previously reported inconsistent results in other research, e.g. Sanchez (2008) (see discussion in Chapter 1, section 1.1). Considering EO as instrumental for entrepreneurs' resource bundling and leveraging, this study provided a complete model about the relationship between resources and firm business resilience in resource-scarce and demanding setting. In particular, and consistent with Lumpkin and Dess (1996), we tested that EO being a system of practices, actions, methods, and managerial actions, offer empirical a direction on resources mobilization and usage to create a substantial competitive advantage as posited by Chirico et al. (2011). This study advanced the indication that the bundling and leveraging processes accomplished by EO (e.g. Miao et al. 2017), is a force to fill the missing link between resources and firm resilience. Hence, we contributed to an effort to open the black box called, e.g., Sirmon et al. (2007) and (Hitt et al. 2011) and addressed the gap in the literature on what makes firm resilience differ (Annarelli and Nonino 2016).

The influence of gender, referring to the societal position of the entrepreneur in accessing and using resources, on EO has been the subject of debates in recent years (Lim and Envick 2013, Runyan et al. 2006). Critiques have noted that female entrepreneurial activities are less strategic and entrepreneurial oriented (Brush et al. 2009). We are also interested in advancing our understanding of gender difference in EO (Saeed et al. 2016, Runyan et al. 2006) by examining how gender influences the relation between resources and resilience. The result presented in Table 5.7 supported, the male is more able to mobilize a physical resource, which coincides expectation in traditional societies (see in Minniti and Naudé 2010, Mozumdar 2018). This may be related to the prior research evidence; in traditional societies such as Ethiopia, the law systematically discriminates female ownership of physical resources such as land in rural areas (Rijkers and Costa 2012).

Moreover, findings in this study indicated that women entrepreneurs are in a better position than men are in mobilizing specific resources (i.e. human capital and social ties), and also their usage (leveraging resources to values). Researchers associated the root cause of this difference to the societal and traditional constraints that women entrepreneurs faced while accessing and using resources to run businesses (Minniti and Naudé 2010, Amin 2010). In DCs, these conditions are harsher for women entrepreneurial activities (Shah and Saurabh 2015). These conditions may hinder women entrepreneurs resource mobilization and usage. However, despite these constraints, the evidence we found a line up to the societal hindrances reasoning. This study supported the notion of fostering EO of women in DCs is vital. Hence, investment in building the EO capability of women entrepreneurs is crucial to harness livelihood and achieving sustainable development in such harsher business environment (Shah and Saurabh 2015). The study provides a promising direction for promoting women entrepreneurship in resource-scarce settings.

Evoking resource orchestration, and EO instrumental role for resource bundling and leveraging practices, we examined previously unreported relationships among resources, gender, EO, firm business resilience on SMEs in DCs.

Turning our attention to EO as the basis for resource orchestration processes– resource bundling and leveraging processes, our results provide an alternative way to fill the missing link between resources and firm outcomes–firm business resilience. By coupling EO with resource bundling and leveraging actions, we showed the importance of resource orchestration processes to build resilient small and medium enterprises (SMEs) in the resource-scarce and demanding environment like Ethiopia. As such, the study shed further light on how the resources, resource orchestration processes in combination with EO enabled resilient building companies, and that could inspire other researchers to explore these phenomena further.

This study also made a methodological contribution. We employed a Partial Least Squares Based Structural Equation Modeling (PLS-SEM) using smart software to test our mediated model. PLS-SEM is a method of structural equation modelling which allows estimating a complex cause-effect relationship model with latent variables (Hair et al. 2011). Therefore, using PLS, we were able to not only assess individual elements of our model but also to assess the mediating relationships proposed in our model. Further, PLS_SEM allowed us to include effect sizes to control for other

variables, compare mediation models against one another and maximizing external validity (Bergh et al. 2016). We also examined the robustness of our results through various techniques (model fit, R square, reliability and validity, discriminant analysis, and the multicollinearity (VIF) as recommended by Hair et al. (2012). Thus, we can provide a test of a resource-EO-resilience model to extend the PLS_SEM methodology to strategic management research and thereby contribute to “the ongoing stream of methodological inquiry in strategy research”(Wiersema and Bowen 2009: 688). We also used PLS-SEM-multigroup analysis to analyze complex relationships, the gender difference in the relations between (1) various types of resources and EO, and (2) EO and firm resilience. To analyze such a complicated relationship multigroup analysis approach is suggested to be of importance (Sarstedt et al. 2011). Thus, we contributed to the advancement of the PLS_SEM in general entrepreneurship and SMEs literature.

Theoretical implications

Business resilience has attracted increasing research attention (see Chapter 2, section 2.3). While previous research has demonstrated what the relationships are between various resources and firm resilience (Alberti et al. 2018, Sirmon et al. 2007), there has been lack of understanding of how resources mobilized and deployed to achieve a higher level of business resilience. For example, prior empirical research has done little to examine the role of EO in support of mobilizing and leveraging these resources to sustain firm resilience. Specifically, to date, no research on resilience has taken account of the extremely disruptive situation pressuring the EO actions, a phenomenon of the business environment in developing countries. This study contributed to fill this gap and thus advanced theoretical understanding of the resilience concept in various settings.

These analyses of various resources influencing EO and EO effect leveraging to create value from diverse resources may also have implications for the more fine-grained understanding of what the relationships are between resources and firm resilience. We extend this research by building upon recent developments in the resource-based view of the firm and related constructs to identify an analytical framework appropriate for SMEs in developing countries context. By using resilience, resource orchestration, and entrepreneurial orientation theoretical frameworks, a systematic means is provided to identify challenges of mobilizing and using scarce resources. From this, potential strategies can be designed to achieve these challenges and thereby to achieve SMEs resilience

Practical implications

As we have noted, one way to orchestrate resources is advancing EO as it helps to establish the linkage between scarce resources available and the resilience of companies desired. In light of this view, this study has three important practical implications for entrepreneurs. First, EO provides a substantial base for human capital, social capital (i.e., business ties), and physical capital resources mobilization and their practical usage. Entrepreneurs should consider constantly renewing and enhancing their EO to sustain the optimal level of their firm's resources. Second, policymakers and practitioners should provide a capacity building work through training and experience sharing to develop EO's of entrepreneurs to maximize the utility of resources for building resilient companies because resources cannot generate competitive advantage unless they are deployed efficiently as suggested by Sirmon et al. (2007). Third, we found a gender difference in EO resources' bundling (human capital, social ties, and physical capital) and leveraging (i.e., effective deployment action) that may lead to variation in firm resilience. Typically, policymakers' investment to upgrade EO resource leveraging capability of female entrepreneurs is a proper direction to enhance their firm resilience endeavours.

Hence, policymakers have to give due attention to capacitating female entrepreneurs through human capital and facilitate in which way they can more optimize social ties resources to their business activities in the setting. The other surprising result is that the female entrepreneur is found in a good position to resource leveraging (usage). This evokes policy shifts to promote women entrepreneurial activities more, to optimize the benefits from a scarce resource.

Limitations and direction of future research

As with all empirical research of this type, our study has limitations. First, this research has not fully examined all processes and sub processes described under ROT. There are still some missing links between resources possession and resources exploitation to fully capture the inside black box-why firm resilience differs. Concerning the breadth of resource orchestration, further research is needed to understand EO action, for example, we still need to know more about the nature of resource synchronization as stated by Sirmon et al. (2011). Second, methodologically the use of cross-sectional data also constitutes an advantage of this research because the findings are broadly generalizable to the studied industries. However, it is also disadvantageous; we can only make inferences about the causal relationships seemingly at play in our findings. A longitudinal study

over time would be valuable to generate more insights into how changes in a company's resource-base over time may shape or affect EO of SMEs and its ability to orchestrate resources: specifically bundling and leveraging processes. Third, the study took place in one country only, Ethiopia, albeit a popular and fast-growing economy in sub-Saharan Africa. How EO behaves in different contexts and over time, may vary. The contextual understanding of EO resource orchestration in different environments needs attention. Further research could replicate this study's design and hypothesized model in other countries to determine if the relationships discovered hold some cultural specificity.

Nevertheless, and fourth, although Chandler and Hanks (1993) found that self-reported measures of owners and general managers of SMEs are highly correlated with archival data, employing self-reported measures, might pose a limitation. The respondents may possess skewed or inflated perspectives for different components in this model, which cannot be triangulated with other respondents from the same SME or through objective data sources in this instance. Still, the results are consistent with our theorization which provides some comfort that errors in our empirical model are not present.

Chapter 6

Business Resilience and Family Livelihood: Supportive Survival Strategies

Abstract

Increasing emphasis has been placed on theorizing how to create resilient small and medium enterprises (SMEs) as a means through which economic growth is stimulated in both developed and developing countries (DCs). Less research, however, focuses on examining the value of resilience to the entrepreneur's family livelihood (Mozumdar 2018). This study aims to fill this gap by analyzing the relationship between firm resilience and family livelihood. However, assessing only the direct effect of resilience on family livelihood alone may not provide a comprehensive description of the relationship (Veidal and Flaten 2014). The entrepreneur remains in the focus of analysis because he/she needs to explore the possible opportunities to transform the value of firm resilience to family livelihood. Turning firm resilience into family livelihood requires strategic decisions, e.g. on investment amount, income generation activities from other sources, on the business sector, on the business location, and the sources of finance. So, the question is what strategies support to turn the value of resilience into a family livelihood. We analyzed data collected from 408 Ethiopian non-farm SMEs. Our study found a positive link between firm resilience and family livelihood. Besides, the positive relationship between firm resilience and family livelihood is stronger for firms that generate additional income from other sources (farming, wage employment, house renting, and remittance), operate in a central location and get loans from private rather than from government-subsidised microfinancing institutions. The implication of this is that being resilient is not an end and that entrepreneur requires making strategic decisions translating firm performance to livelihood. These results have important implications for policymakers related to microfinance in the studied context.

Keywords: Resilience, SMEs, strategy, family livelihood

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6.1. Introduction

In a turbulent, resource-scarce business environments in which companies with resilient performances are not evident, an entrepreneur's contribution to family livelihood is not evident either. Livelihoods in such environments are complex and dynamic, and one constant may be the day-to-day uncertainty of survival (see Marschke and Berkes 2006). The approach to study livelihood by studying survival strategies of individuals, households or groups making a living, coping with uncertainties (Marschke and Berkes 2006), seems to fit the specific target group of this research, i.e. entrepreneurs. After all, entrepreneurs can be described by their essential agency elements of entrepreneurship, i.e. 'a praxis of knowing and doing of anticipating and acting' (Fuller 2000) in which entrepreneurial orientation (EO) fuels their actions (Miao et al. 2017, Mozumdar 2018). Particular attention is paid to the level of entrepreneurial behaviour to cope with disruptions and uncertainties regarding their family livelihoods (see Scoones 1998). Such an approach to the study of livelihoods is then actor-oriented and contingent (Bruton et al. 2013, Marschke and Berkes 2006). Central to this study are survival strategies enacted by entrepreneurs, besides their strive for resilient business performance, to mitigate threats of disruption of their family livelihood.

Especially in developing countries (DCs)²⁹ where people live in poor circumstances, entrepreneurship is a vital driver to reduce poverty³⁰ (Ramswamy and Kumar 2013, Möller 2012, Bruton et al. 2013, Ács et al. 2011). Furthermore, Bruton (2010) critically observes that 'entrepreneurship literature has historically shied away from issues involving poverty' (p. 683). They suggest that scholars need to direct their attention to entrepreneurship research in DCs where poverty is a significant challenge (Bruton 2010). This interest may be linked to the claim that SMEs are a fundamental part of the economic fabric and thus play a crucial role in the growth and prosperity of many countries in the world including DCs (Minniti and Naudé 2010, Liang et al. 2018). The entrepreneurial ability to contribute to family livelihood is dependent on the extent to which entrepreneurs succeed in reaching a viable business performance (e.g. business growth and

²⁹ Sometimes also noted in the literature as a least developing countries. World Bank presented in 2016, as Low income countries with \$1,025 or less per day. It includes many countries of Africa, Asia, and Latin American. They are fairly poor in human development index according.

³⁰ The United Nations defined it in 1995 as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. Related terms often used: abject poverty, extreme poverty, absolute poverty, and destitution, etc.

income) (see Shah and Saurabh 2015). However, to transform a resilient business performance into a contribution to family livelihood is challenging for entrepreneurs acting in a disruptive business environment. Physical barriers (e.g. environmental threats, infrastructural instability) and institutional barriers (e.g. limitations of governmental support, political instability) can create disruptions or at the least the threat of disruptions (Jamali 2009, Ács et al. 2011). These disruptions not only can hinder business resilience but could also be an obstacle to the transformation of business resilience into a contribution to family livelihood. However, although business resilience is acknowledged as an important driver of economy and employment (Williams and Vorley 2014), we know very little about whether those well performing SMEs either contribute or do not contribute to family livelihood (Autio 2008). As pointed out by Sin et al. (2005), an important message from the findings of entrepreneurship research is that merely investigating the direct relation of a firm performance on livelihood does not provide a complete picture. To identify the strategies by which resilience improves family livelihood, many different moderating variables have to be considered (Rauch et al. 2009). The gap in this line of research is the limited amount of studies on strategies that further clarify the relationship (Tsai and Yang 2013, Blackburn et al. 2013) between firm resilience and family livelihood.

The overall idea of creating resilient SMEs, which is not an end goal by itself but rather a beneficial asset to involved people's wealth and well-being, needs due research attention (Blundel et al. 2014, Mozumdar 2018). This idea is substantiated by Hitt et al. (2011) who state, from a strategic entrepreneurship viewpoint, that building resilient SMEs demands to link resources, entrepreneurial resources orchestration processes, and beyond firm resilience, to link to other outcomes such as firm's social benefits especially to family livelihood. This is because the consequence of promoting such entrepreneurship is to improve their people's family's livelihood and society's wellbeing (Hitt et al. 2011, Dahles and Susilowati 2015). This 'other outcome' is highly demanded especially in DCs such as Ethiopia. The extent to which entrepreneurship can contribute to family livelihoods via their business performance (Shah and Saurabh 2015) and other survival strategies is then of interest also regarding the economic role entrepreneurs play in developing countries.

This highlights the need to question the role of SMEs in household livelihood rather than merely advocating them and taking policy measures to support and develop small business sector (Kolk

and Rivera-Santos 2018). Our study will address two elements; giving empirical evidence to (1) the relationship between business resilience and family livelihood and to (2) survival strategies which can be supportive of strengthening the relationship between business resilience and family livelihood. Concerning the first aim; prior studies have not analyzed the effect of business resilience on family livelihood (Mozumdar 2018). Concerning the second aim, we can state that in this study survival strategies are researched by exploring the moderating influence of the choice of sectors involved, the location of the business, and sources of financing; and decisions on generation of income from other sources, and investment amount. For entrepreneurs, it is highly relevant to assess how these choices intervene in the relationship between firm performance and livelihood (Blackburn et al. 2013, Nybakk et al. 2011, Veidal and Flaten 2014). A lack of research into supportive strategies is observed which in turn could provide information for entrepreneurs as well as policymakers regarding appropriate strategies (Nybakk et al. 2011, Boter and Lundström 2005, Blackburn et al. 2013).

The chapter is organized as follows. In section 6.2, we present the theoretical framework and develop hypotheses. Section 6.3 describes data and methods. The results are explained in section 6.4, followed by a discussion of these in section 6.5. Conclusions, limitations, and directions for future research are presented in section 6.6.

6.2 Theory

Family livelihood and SMEs' contribution

The concept of “family livelihood” has been a critical agenda point around poverty alleviation and rural development discourse and practice over the past decade (Liang et al. 2018). The concept covers a more broad-based development describing family attempts to meet different consumption and economic necessities at the household level, by coping with uncertainties and responding to new opportunities (Blackburn et al. 2013). According to Hitt et al. (2011), the livelihood concept is normatively based on the ideas of capability, equity, and sustainability; each of which is both end and means. Thus, family livelihood addresses capabilities, assets (stores, resources, claims), and activities required for a means of living of families. Next to ‘household livelihood assets’, a distinction is made into ‘household strategies/activities choice’ and ‘livelihood outcomes’ (Babulo et al. 2008). Livelihood assets refer to human and non-human resources upon which livelihoods are built and to which people need access. Livelihood strategies denote the range and combination

of activities and choices that people make and undertake in order to achieve their goals. Livelihood outcomes are the achievements and outputs of the strategies (Babulo et al. 2008).

This concept is not restricted to individuals but also associated with family, and communities (Nybakk et al. 2011). Researcher also linked the concept to shocks (Nybakk et al. 2011) in the sense that a resilient family is one that can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable opportunities for the next generation as well as contribute net benefits to other livelihoods at the local and global levels (Dahles and Susilowati 2015).

In DCs households pursue a wide range of livelihood strategies. It includes farming (crops & livestock production) and off-farm/non-farm activities. Off-farm/non-farm activities may comprise wage employment, seasonal wage employment, own business/employment (own SME) and receiving remittances (Babulo et al. 2008).

In this study the focus is on the contribution of own business (SME) to the family livelihood (Haggblade et al. 2010). There are two divergent views in the existing literature about the contribution of SMEs to livelihood; the pro-SMEs and the anti-SMEs (the sceptics) (see Ganbold 2016). As pointed out by Ganbold (2016), while the pro-SMEs consider that SMEs play a significant role in the livelihood improvement of countries, the sceptics challenge this view by concluding that larger firms have a greater effect than SMEs. The proponents justify that SMEs are a viable tool for poverty alleviation as they stimulate new employment opportunities, develop human capital and enhance entrepreneurial skills (Akgün and Keskin 2014, Halvarsson et al. 2018). Besides, SMEs foster competition and advance technological innovation and productivity growth. Contrary to these notions, the skeptics reject the idea that SMEs are the engine for livelihood improvement. They suggest that there is not enough evidence to demonstrate that SMEs have any influence on reducing poverty levels in different regions (Agyapong 2010). They present the argument that most research on the contribution of SMEs to livelihood has been theoretical and unsupported by empirical analysis (Agyapong 2010). These 'pro and anti' opinions on SMEs may be attributable to the fact of previous, inadequate empirical research connecting SMEs performance to livelihood outcome (Mozumdar 2018). Since limited studies have thus far elaborated this idea

more in detail and inconclusively, research is required to fill this gap (Haggblade et al. 1989, Nagler and Naudé 2017).

Concerning the concept of resilience, growing literature explores the creation of resilient SMEs in the midst of unfolding chaotic and disruptive conditions in different countries (Alberti et al. 2018, Akgün and Keskin 2014). This has initiated a debate about the usefulness of the resilience concept and its benefit to our understanding of economic development (Ganbold 2016, Dahles and Susilowati 2015). However, taking into account that SMEs encompass 90% of the private sector and also provide more than 50% of employment opportunities in most of DCs (Davis et al. 2014, Akgün and Keskin 2014), we argue in this study that operating SMEs provide diverse benefits: economic, social and better livelihood (Haggblade et al. 2010, Mozumdar 2018). Realizing family livelihoods in many rural areas of the world is complex and dynamic: again, perhaps the one constant is the day-to-day uncertainty of survival (Nybakk et al. 2011).

Concluding to resilient SMEs constituting a necessary condition to family well-being aligns strongly with efforts towards the achievement of the Millennium Development Goals (MDGs)³¹ in which the adequate policy attention for the development of SMEs is considered to be crucial in Sub-Saharan Africa for their achievement (Autio 2008). SMEs can serve in the region as very important propellers for obtaining national development goals, such as family livelihoods growth (Mozumdar 2018). The sub-Saharan African countries like Ethiopia presently face numerous economic and social challenges, necessitating intensification of entrepreneurship policy developing and mainly the SMEs sector (Dahles and Susilowati 2015). This research tries to contribute to the debate by assessing the value of firm resilience for family livelihood in a developing country like Ethiopia.

Non-farm entrepreneurial activities are ubiquitous in Ethiopia (Nagler and Naudé 2014, Nagler and Naudé 2017) and available evidence shows directly or indirectly that most families take part in these activities (Haggblade et al. 1989). Along with the direct impact on employment generation, SMEs can help increase family livelihood incomes and food security status for rural households (Haggblade et al. 1989). SMEs activities in Ethiopia can be dedicated to the final goal of contributing to family livelihood based on the necessity to contribute. Policymakers in Ethiopia

³¹ *Especially goal one which aims at eradicating extreme poverty and hunger.*

have become interested in the relations that SMEs (own-employment) can have on livelihood (Rijkers and Costa 2012, Mozumdar 2018). As an insight into the influence of the resilience of SMEs in Ethiopia on family livelihood is lacking, we propose the following hypotheses on SMEs resilience-enhancing family livelihood (see Figure 6.1) by improving overall livelihood conditions and household food security.

H1: Business resilience of SMEs will show a positive relationship with the family livelihood of Ethiopian entrepreneurs.

Supportive survival strategies

Survival strategy is used for analyzing people's strategic responses to economic crises. This approach is valuable to explore the dynamic nature of the environment in which decisions are made (Owusu 2007). For this reason, we applied the theory on survival strategies to the entrepreneurial setting in which there is a threat of disruption. The entrepreneur acts in an environment in which there is a threat of poverty and a sense of insecurity which not only reflects on the company but as well on their family livelihood. Thus strategies to react on the dynamic environment are not only related to building the resilience of their company but can as well be adopted for trying to safeguard the business performance in terms of resilience but as well be directed at safeguarding the contribution of the firm to their family livelihoods.

From a firm's perspective, the entrepreneur remains the center of the focus in deploying strategies to turn firm resilience into family livelihood (Blackburn et al. 2013). Assessing the direct effect of firm resilience on family livelihood alone may not provide a comprehensive description of the relationship (Veidal and Flaten 2014). Although well-performing companies, as widely suggested, improve livelihood and overall wellbeing of a family of entrepreneurs (Dahles and Susilowati 2015, Blundel et al. 2014) still, the entrepreneur has to make strategic decisions to maximize the benefits for family livelihood conditions. Boter and Lundström (2005) reaffirmed the apparent conclusion that it is not only about well-performing, but also deployment of strategies matter to the sustenance of firm performance to livelihood. From this perspective, thought must be given to the importance of strategies enacted by entrepreneurs in supporting firm performance for the wellbeing of the business owner's family. The question is what constitutes suitable strategies enhancing the conversion of firm performance to livelihood?

The relationship between business' performance and livelihood varies also depending on the amount of investment made on the firm, income generated from other sources, and sector (Nagler and Naudé 2014, Nagler and Naudé 2017). Sectors can vary (Nybakk et al. 2011), in complexity and styles of strategy making (Wiklund and Shepherd 2005, Wiklund and Shepherd 2011). In this study, business sectors are classified into the industry (including manufacturing, agribusiness, and construction), and service sector (including consumer, business service, e.g. transportation, and trade). The sectors classified under industry are assumed to focus more on value adding and processing their products and services before dispatching them to the market. We expect entrepreneurs involved in an industrial sector may gain sustainable income from their entrepreneurial activities given the growing demand for industrial products by both urban and rural population (Nagler and Naudé 2014, Nagler and Naudé 2017).

Moreover, sources of financing companies are relevant issues that need attention in the relationship between firm performance and family livelihood. The government has expanded microfinance institutions (MFIs) to support entrepreneurs who may be ill-served by traditional commercial banks (Allen et al. 2014, Cull et al. 2009, Cull et al. 2018). As an industry, MFI has achieved an impressive scale reaching 211 million customers globally in 2013 (see Cull et al. 2018). Paradoxically, emerging evidence suggests that the benefits of microcredit to borrowers may be unassertive (Banerjee et al. 2015). Most of MFIs worldwide, including Ethiopia, provided by government subsidy, have been criticized for their bureaucratic services, political manipulation and less flexibility in financing structure (Bruhn et al. 2010, Bruton et al. 2013) when compared to private microfinancing. We expect that those hurdles less hinder those who access private MFI's. Therefore, sources of financial sources affect the conversion of performance into a family livelihood. Thus, we hypothesize that the business sector, business location, and finance sources moderate the relationship between firm performance and family livelihood. This gives rise to the following hypothesis:

H2: The positive relationship between business resilience and family livelihood will be stronger when the entrepreneur operates in a central location than a remote location.

H3: The positive relationship between business resilience and family livelihood will be stronger when the entrepreneur is involved in industrial rather than a service-oriented sector.

H4: The positive relationship between business resilience and family livelihood will be stronger when the entrepreneur sources loans from private microfinancing than from a government-subsidized microfinance company.

H5: The positive relationship between business resilience and family livelihood will be stronger with a higher amount of firm investment.

H6: The positive relationship between business resilience and family livelihood will be stronger for those entrepreneurs earning more additional income from other sources.

6.3 Methods

Research setting, sample, and data

The more detailed information on research setting, sampling and on data collection methods was elaborated in Chapter 1, section 1.4.

Measures

The business resilience variables constituted in this conceptual framework (see Figure 6.1) are already described in chapter 3, see section 3.4. The remaining variables measurement are discussed below. Detailed information is presented in Table 6.1 (see in Appendix G).

Family's livelihood (family livelihood outcome)

The livelihood outcomes that scholars consider in their research can vary (Serrat 2017, Mozumdar 2018). To measure the views of SMEs owners on their family livelihood, we used two items evaluating, i.e., food security status, and overall livelihood conditions. We asked the research participants to rate their views regarding their household food security status and rate their overall family livelihood conditions. A seven-point scale was utilized to measure the response. The family livelihood construct is measured by summated mean score of the 2 items. The score is then standardized to meet normality by using the standardized z score.

Moderator Variables

Business sector: the business sector type was measured using two normative classifications. We asked respondents to label the sector they are involved in (agribusiness oriented, manufacturing oriented, consumer-oriented, construction oriented, trade and business services, e.g. transportation). Then we characterized them into service business sector (consumer, trade, and business services) and industry sector is mainly focusing on processing functions (agribusiness,

manufacturing, and construction). The industry sector is coded 1, and we provided 0 for the service-oriented sector.

Business location: this variable measures the enterprise geographical location relative to the centre with higher-order functions such as main market hub roads, and access to other facilities. We dichotomized the location categories into ‘the centre’ (X=1), and ‘otherwise’ (0) for those firms operating in remote areas.

Financial sources/MFIs accessed: the data was gathered from two microfinancing companies, i.e. Oromia credit and saving share company (OCSSCo), and Wasasa. The former is labelled for its bureaucratic service structure and associated with government subsidy. Most of MFIs in Ethiopia according to Wale (2009) covering 90% are subsidized by the government. Although the share of private microfinancing in general in the country is insignificant, the Wasasa emerged to fill the gaps unfilled by those government subsidized companies such as the OCSSCo. Therefore, we coded those accessing and getting financial services from private microfinance_Wasasa coded =1, and otherwise, 0 for government-subsidized MFIs, i.e., the OCSSCo to finance their businesses.

Investment amount: The total amount of capital invested in the firm (log-transformed).

Income from other sources. This is the sum of incomes (log-transformed) that generated from various activities (farming, and off-farm) other than own business or self-employment including farming, wage, house renting activities, and remittance.

Control variables

In this study, we controlled several variables: marital status; educational status; gender; household size (HHsize); and age of entrepreneurs as well. These all accumulate in the following conceptual framework.

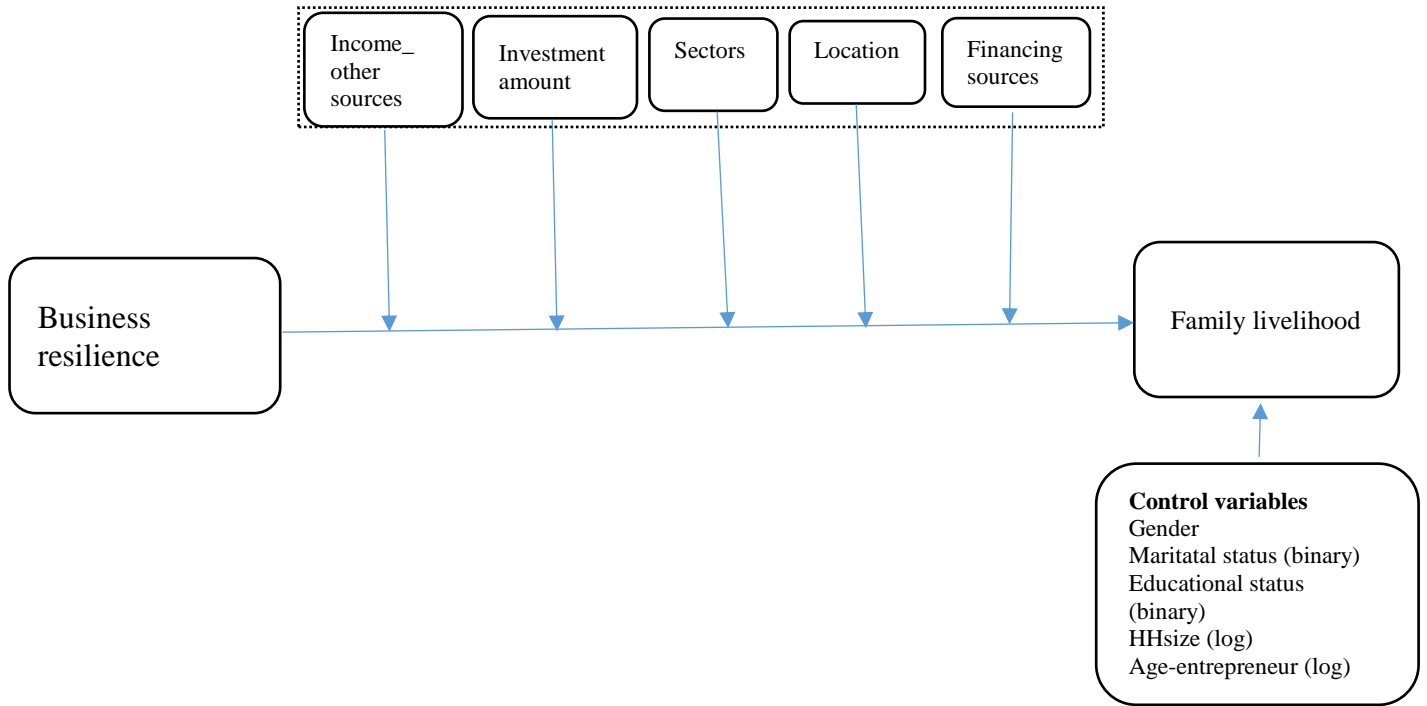


Figure 6.1: Conceptual framework

Analytical approach

The purpose of this research was to examine the business resilience- family livelihood relationship and the supportive survival strategies income from other sources, investment amount, business sector, business location, and sources of finance. To test the hypotheses, hierarchical linear regression was used. Hierarchical regression is especially appropriate for this study because it allows for the evaluation of incremental changes in R-squared as new variables are entered while controlling for the effects of other variables of interest. Hierarchical regression analysis allows for a comparison between alternative models with and without interaction terms (Hayes and Scharkow 2013). In each step of the hierarchical analysis, when new variables entered in each higher-order block, the statistical significance of incremental R2 and F tests are evaluated. The results of the regression analysis are reported in Table 6.3. Following Hermon Statistical approach (Podsakoff et al. 2003), we tested the common method variance (CVM) and known as bias. We ensured that the CVM is not a problem in this study, because the Hermon test value obtained is less than the 50% threshold suggested under this approach (Podsakoff and Organ 1986).

6.4. Results

The means, standard deviations and pearson correlations of the variables are displayed in Table 6.2. The mean value of marital status is 0.80 indicating the majority of participants were married. The gender variable average value of 0.51 means that male entrepreneurs represent 51% in our study. As this means that the female represents 49% both of them were almost equally represented in this study. The mean value of educational status is 0.93 indicating that most of the respondents appeared literate or at least are able to read and write. The other variables reported in Table 6.2 (age of entrepreneur, HH size, income from other sources, and the average amount of a firm investment). The mean values of variables: family livelihood and business resilience, which were 4.12 and 5.21, respectively, showing the values were moderate. The average value of firms that categorized into a location (central), business sectors (industry), and those getting financing services from Wasasa was found to be 0.70, 0.41, and 0.34, respectively. This indicates that 70 % operate near to the centre, 41% of the respondents were involved in the industrial sector, and 34 % of them getting financial services from private microfinancing company, i.e. Wasasa.

Table 6.2 Means, standard deviations and correlations for quantitative measures

Constructs/Variables	Mean	S. D	1	2	3	4	5	6	7	8	9	10	11	12
1. Maritalstatus	0.80	0.40	1											
2. Gender (Male)	0.51	0.50	-0.12*	1										
3. Edustatus (literate)	0.93	0.26	-0.02	0.19**	1									
4. Age_enterprneur	35.08	8.46	0.39**	0.01	-0.20**	1								
5. HH_size	4.36	2.55	0.07	0.06	-0.29**	0.28**	1							
6. Business_resilience	5.21	1.08	0.03	0.26**	0.29**	-0.07	-0.16**	1						
7. Income_othersources	33.5 ³²	52.5	0.04	-0.04	0.07	0.02	0.14	0.19*	1					
8. Investment amount	338.3	2677.3	0.01	0.08	0.02	0.05	-0.05	-0.05	0.06	1				
9. Location (near cenere)	0.70	0.46	-0.01	-0.13**	-0.01	-0.02	-0.05	-0.05	0.09	0.03	1			
10. Sectors_industry	0.41	0.49	0.02	0.22**	-0.07	0.07	0.09	-0.09	0.03	0.08	0.01	1		
11. MFIsType_private	0.34	0.48	0.15**	-0.07	0.06	0.20**	0.11*	-0.09	0.03	-0.04	-0.16**	-0.03	1	
12. Family livelihood	4.12	1.06	0.04	0.02	0.27**	-0.04	-0.10	0.38**	0.22*	0.12*	0.18**	-0.08	0.15**	1

Significance level: ***p < 0.01 **p < 0.05 *p < 0.1

³² The investment and income from other sources amounts are reported in (x1000). Currency used is Ethiopian birr. Exchange rate in the 2016 year: Average 1 US dollar= 22 Ethiopian birr.

Results of regression analysis

Tests

We tested the proposed hypotheses by conducting hierarchical regression analysis. We used SPSS variance inflation factor (VIF) tests to assess collinearity among the regression model predictors. The highest VIF for any variable in our models was 2.04. None of the VIF scores approached the commonly accepted threshold of 10 used to indicate potential multicollinearity problems (Petrocelli 2003). Furthermore, by transforming the data from SPSS into stata software version 14, we conducted the endogeneity test. Sources of endogeneity can be an omission of variables, errors in measuring variables, and simultaneous causality (Wooldridge 2010). We addressed endogeneity concern by searching an instrumental variable (IV). IV is a variable which has a strong correlation with the explanatory variable (business resilience) but has a weak correlation with the dependent variable (family livelihood). The IV chosen for this specific model was Entrepreneurial Orientation (EO). EO has a strong correlation with business resilience but weak correlation with a livelihood. From chapter two literature review part, we have theoretical support for the relationship between EO and business resilience. The result found indicates the P value is greater than 0.5, so there is no endogeneity problem in this model. We tested that the model has no omitted variable bias problem as well. We also tested the variable chosen as IV for endogeneity concern is strong (the test result in the Appendix H, see ii).

The regression results are provided in Table 6.3. In the first step of the regression (Model 1), the control variables were entered (marital_status, edu_status, gender, age_of_enterprneur, and HH size). The overall model was significant ($F = 7.76$, $p < .001$) with an adjusted R^2 of 11%. Additionally, the control variable educational status of entrepreneurs was found to be significant. Male entrepreneurs contribute less to family livelihood compared to female entrepreneurs, which is in contrary to the current expectation concerning entrepreneur gender contribution to family livelihood (Jennings and Brush 2013).

In the second step of the regression (Model 2), the main effect-business resilience was introduced and was significant and positive at the $p < .001$ level. The inclusion of this variable improves the model fitness (model 2: $\Delta R^2 = 0.12$, $P = 0.000$), increasing the adjusted R^2 of the model from 11 to 22 % ($F = 20.58$, $p < .001$). Thus, hypothesis 1 was supported. This means that we confirmed the positive effect of firm resilience on the family livelihood of entrepreneurs. Indeed, building

resilient SMEs is essential to improve the living conditions in this specific study context. Finally, model 3 tested the moderation variables' (income_from_other_sources, investment_amount, location, sectors, and sources of finance) effect on family livelihood. Tests show that the inclusion of these moderation variables give a significant increase in R2 from 0.24 to 0.41 (model 3: $\Delta R^2=0.13$, $p = 0.00$). The results of moderation variables: income_from_other sources, investment amount, location, sector, and sources of finance were $\beta =0.22$, $t= 1.98$; $\beta =0.02$, $t=0.18$; $\beta =0.19$, $t=1.93$; $\beta =-0.04$, $t=-0.36$; and; $\beta =0.22$, $t=2.16$, respectively. With these results, we confirmed that income_from_other sources, business location, and sources of finance have a positive and significant moderation on the relation between firm resilience and family livelihood. Hence, the model supported hypotheses, H2, H4, and H6. However, we found no evidence regarding the differential relationship of the business sector and investment amount on business resilience-family livelihood and hence H3 & H5 were not supported. In terms of the variable related to income generated from other sources, the study result is in line with Mozumdar (2018) research in Bangladesh.

Table 6.3 Regression analysis result for the relationship between business resilience and family livelihood

	Variables	Model 1	Model 2	Model 3
Control Variables	Marit_stat	0.089 (1.564)	0.080 (1.514)	0.125 (1.215)
	Edu_status	0.325 (5.381***)	0.216 (3.662***)	0.052 (0.419)
	Gender(Male)	0.002 (0.034)	-0.088 (-1.594)	0.066 (0.618)
	Age-entreprneur (log)	0.011 (0.169)	0.008 (0.131)	-0.218 (-1.668*)
	HHsize (log)	0.004 (0.059)	0.021 (0.322)	0.155 (1.147)
Main effects	Business resilience		0.377 (6.553***)	0.379 (3.275***)
Moderation variables	Incomefromothersources (log)			0.222 (1.980**)
	Investment (log)			0.021 (0.178)
	Location_near center			0.189 (1.929*)
	Sectors_industry			-0.037 (-0.361)
	MFIstype_private			0.221 (2.163**)
	R2	0.12	0.24	0.41
	Adjusted R2	0.11	0.22	0.31
	R square change (Δ)	0.12	0.12	0.13
	Sig. F Change	0.00	0.00	0.02

Note: a Log-transformed value. Significance level: ***p < 0.01 **p < 0.05 *p < 0.1 In bracket t_value

6.5. Discussion and conclusions

The small and medium enterprises (SMEs) play a vital role in improving family livelihood (Mnenwa and Maliti 2008, Bruton et al. 2013). The pro-SMEs scholars have emphasized that these firms in both developed and developing countries represent, a key opportunity for contributing to poverty reduction, promoting economic growth, creating higher employment, generating competitive markets, and feeding technological innovation (Peci et al. 2012, Acs and Audretsch 1990). However, sceptics of the pro-SME view suggest that an SME centred approach is not a viable strategy for economic growth as well as livelihood change. To date, few researchers have attempted to confirm the relation of firm business performance to family livelihood (Mozumdar 2018). In this chapter, we extended the existing literature and debates on the role of SMEs in fostering economic growth and reducing poverty especially family livelihood. In doing so, using data generated from 408 SMEs in Ethiopia, the nexus between SMEs and family livelihood was explored based on empirical study.

This study aims to provide evidence describing the firm performance-family livelihood link Autio (2008) and incorporated variables/strategies strengthening this relationship within non-farm enterprises (Nagler and Naudé 2017). We looked at the moderation of factors such as amount of income from other sources, investment amount, sector, location, and source of financing (accessed MFIs types) of the relationship between business resilience and family livelihood. Given the complexity of transforming the benefits of firm resilience to family livelihood (Mozumdar 2018), this study theoretically posited that income from other sources, investment, sectors, firms operating in a central location, and those sourcing loans from a private company influence the SMEs resilience–family livelihood relationship.

This study confirmed that firm business resilience has a positively related to family livelihood in this study context. This supports our argument that fostering firm’s resilience is vital for family livelihood improvement. However, the strength of this relationship is contingent on moderating factors: on the income generated from other sources, business location and loan financing sources. The hypotheses on the choice of the sector and investment amount were not supported in this study. These findings, which suggest contingency of the relationship between firm resilience and livelihood, is important because previous studies have resulted in heterogeneous outcomes for resilience-family livelihood relationship (Mozumdar 2018) without taking into account the

business environment. Furthermore, considering that, business resilience results from the contingency perspective (Rauch et al. 2009), our research findings complement those of Nybakk et al. (2011) and Mason (2015).

With this study, we underpinned empirically the complexity of the relationship between resilience and family livelihood, and the idea that family livelihood is the effect of entrepreneurial efforts. Looking at the results, we could state that this study confirms the SMEs proponents as well as the sceptic's point of view. To the proponent's point of view, we can say that SMEs resilience contributes to family livelihood. To the sceptic's point of view can be said that it is not only the SMEs itself but the entrepreneur who boosts the resilience and strategically supports the transformation of resilience into a contribution to family livelihood.

To conclude, this study proposed to test the linkage of firm resilience and family livelihood, and as well the moderation factors/strategies strengthening the linkage. Our results of hierarchical regression analysis indicate that the presence of a positive relationship between firm resilience and family livelihood, and the link is stronger when firms generating additional income from other sources (farming, wage, renting house, and remittance), operate near the centre, and accessed finance services from private MFIs, i.e., Wasasa. This suggests that within a disruptive environment, entrepreneurs not only rely on building a strong (as possible) firm resilience; they also seem to support their family livelihood by strategic choices. This could suggest that entrepreneurs in such disruptive environments do not take their contribution to family livelihood via firm resilience for granted.

Implications

The empirical investigation, based on a sample of 408 SMEs in Ethiopia, produced some interesting results that have implications for both theory and practice. Growing research has theorized the importance of fostering resilient SMEs to harness livelihood conditions (Alberti et al. 2018). The goal of operating SMEs is to improve family livelihood. From this angle, not only research on what promotes firm resilience, but also researching the value of resilience, we argue, provides all-inclusive evidence called on strategic entrepreneurship and resilience (Hitt et al. 2011, Alberti et al. 2018) for entrepreneurs as well as for policymakers in such demanding setting.

In terms of theoretical implications, our study underscores the complexity of translating the value of resilience to livelihood by demonstrating the importance of amount of income from other activities, business location and financing sources choices to enhance the positive relation of firm performance on family livelihood. Considering the need to examine different moderating variables to clarify the complexity of the resilience and family livelihood relationships, helps policymakers to understand better the strategies of maximizing the role of the small and medium enterprises (SMEs) for the economy and poverty reduction programs.

From a managerial perspective, this study has two implications for practitioners. First, managers need to address the location of business when developing their company; the business location choice plays a significant role for SMEs owners to translate the value of firm performance to family livelihood. Second, entrepreneurs should be careful in choosing their access to financial sources. Those enterprises that are financed by private microfinance have shown to benefit more. In line with this, government based financial institutions should reflect on their extent of support to SMEs. Their financial institutions seem to suffer from their bureaucratic nature. Third, entrepreneurs' diversification of income sources (farming, wage, house renting, and remittance) which are farming, non-farm, and off farm activities) are also essential as they strengthen the relationship between firm resilience and livelihood outcome.

Limitations and Future Research

Like any study, this study is subject to some limitations, which open avenues for future research. First, our study is cross-sectional. More research evidence is needed on the causal relationships between the dependent and independent variables using a longitudinal research design. Yet, future research could help explain the potential changes in firm resilience and livelihood conditions over time by collecting longitudinal data. However, we based our hypotheses on existing theory (e.g. Rauch et al. 2009) and tested for common method bias following Podsakoff and Organ (1986), and did not find any concerns that may have affected our results. Second, drawing on a sample of SMEs from a single national context, Ethiopia, has limitation. The resilience (Linnenluecke 2017) and family livelihood concepts are contingent with the environment and thus vary across countries. Thus, future studies should replicate this research in other settings.

Chapter 7

General Discussion, Conclusions, and Implications

7.1 Introduction

This dissertation revolves around the question of how entrepreneurs who manage their SMEs under conditions that include poverty, scarce resources, and disruptive circumstances are able to contribute to their families' livelihood through their entrepreneurial activities. In these circumstances, business performance is considered a means rather than a goal in itself (Bruton et al. 2013). Thus, what can an entrepreneur, within his capacity and under such unfavorable business circumstances, do to contribute to his or her family's livelihood and, thus, alleviate poverty and spur economic growth? The entrepreneurial activities of interest are directed at orchestrating resources to achieve business resilience, as well as activities that support the conversion of business resilience into a contribution to family livelihood.

Achieving business resilience and managing the conversion of business resilience into family livelihood are labeled as survival strategies to address the difficult circumstances in which these entrepreneurs function. Entrepreneurs, by their actions, are assumed to mitigate threats of disruption to their family's livelihood (Marschke and Berkes 2006). Most SMEs operating in DCs face challenges (Tukamuhabwa et al. 2015, Tengeh 2016) as their business environment is filled with uncertainty and complex, multifaceted disruptions (Littlewood and Holt 2018). These may encompass various issues, including political volatility and conflict (Branzei and Abdelnour 2010), poorly functioning markets and institutions (Parmigiani and Rivera-Santos 2015), infrastructural difficulties and complexity associated with accessing services (Zoogah et al. 2015), and natural environmental challenges (Linnenluecke et al. 2012). Moreover, SMEs have higher failure rates than large businesses, which can be explained by SMEs being generally more vulnerable, by nature, compared to large companies because they lack resources and are poorly prepared to survive disruptions (Ayyagari et al. 2011, Wedawatta et al. 2010). Despite these challenges, some SMEs become more successful and contribute more to the economy than others (Page and Söderbom 2015). According to Page and Söderbom (2015), small businesses are a significant contributor and offer more than what is desired from larger companies in terms of employment and income. The

question is, then, what makes some SMEs more resilient and makes others fail? This question has yet to be answered in the existing literature (Miao et al. 2017, Ates and Bititci 2011, Annarelli and Nonino 2016).

The following section (7.2) presents brief answers to the research questions, followed by the main conclusion of this research (7.3). Section 7.4 discusses the contribution of this research to the body of knowledge, while Section 7.5 discusses the study's limitations and directions for future research. This chapter ends with a description of the practical implications (7.6).

7.2 Answers to the research questions

Research Question 1 (Chapter 2)

As no published research has attempted to provide a generalized understanding of resilience in the context of SMEs operating in DCs (Annarelli and Nonino 2016), scholars have called for structuring the literature in this domain to provide direction for future research on the topic (Williams and Vorley 2017, Tognazzo et al. 2016, Thomas et al. 2015, Sullivan-Taylor and Branicki 2011). Hence, a systematic literature review was conducted to structure the literature and formulate guidelines for both the present and future research.

Research Question 1: How can we define the resilience concept in relation to SMEs in turbulent, resource-scarce environments?

The chapter presents an overview of the SME-oriented resilience literature from 2000 to 2018. Using related search terms (e.g., SMEs and resilience), we sourced 415 papers from major academic databases (e.g., Scopus, Web of Sciences, Science Direct, Emerald, and Google Scholar). Next, we performed a thorough screening that resulted in a set of 118 articles as the basis for the answer to Research Question 1.

Imperative of research into the resilience of SMEs in DCs

The uncertainty and multi-faceted disruptive nature of the business environment is the habitat of most of SMEs operating in DCs (Tukamuhabwa et al. 2015, Tengeh 2016). These challenges are reflected in various rankings, such as the World Bank's Global Ease of Doing Business Index, with five of the bottom ten countries in the index located in the developing countries of Sub-Saharan

Africa (World Bank, 2017). In the complex, uncertain, and unpredictable environment (Alexander et al. 2014, Chironga et al. 2011, Zoogah et al. 2015) that prevails across most DCs, researching SMEs' resilience is imperative. Positioning this research within the context of SMEs and DCs is imperative not only because of practical socioeconomic reasons but also from a theoretical angle. Although the meaning of the resilience concept currently lacks consensus among scholars, there is consensus on the context-dependent nature of the concept (Littlewood and Holt 2018) and how it is shaped by company size (Sullivan-Taylor and Branicki 2011). Theoretically, resilience is then researched in most vulnerable circumstances, which require resilience, opening up the possibility of gaining an in-depth understanding of the resilience concept.

Persistently disruptive circumstances

Scholars also seem to have reached a consensus on the dependability of resilience on the nature of the disruptions and business environments (Linnenluecke 2017). In today's turbulent business environment, SMEs face ongoing challenges in their quest to be successful (Conz et al. 2017). The nature of disruptions facing SMEs, being complex, chaotic, and persistent (Littlewood and Holt 2018), may not limit research only to the discrete event as is mostly done in research into resilience in developed countries (Linnenluecke 2017). Most of the SME resilience research has focused on a specific, discrete disruption (e.g., the 2008/09 global economic crisis and Hurricane Katrina in 2008 in the United States). In line with the discrete or event-based approach, resilience is considered a return to a state of equilibrium, similar to how this concept is defined in the physical and ecological science, or a reaction to a specific event. However, considering the persistence of disruptions, resilience research into SMEs acting in DCs should not be limited to event-based disruptions (Linnenluecke 2017).

Definition of resilience: Three dimensions

The analysis of definitions leads to three core characteristics of resilience in the SME field: performance growth, adaptation (adaptability), and seizing business opportunities. The characteristic of seizing business opportunities within a challenging environment is, for the first time, compared to other literature, added as a key constituent of the resilience definition in the general business and SME domain.

Need for quantitative research into resilience

Considerable previous research has focused on theory building, but the bulk of it took place in the developed-world context and employed a qualitative design. Thus, to lay the empirical foundation for resilience development, we highlight the need for more quantitative studies, essentially a survey-based approach to generate empirical insights regarding SME resilience, especially from resilience research into SMEs acting in a demanding environment (i.e., in a DC).

Robust measurement of resilience

We found that, thus far, limited studies have focused on developing a way to measure the resilience of SMEs (Ortiz-de-Mandojana and Bansal 2016). This lack of a measurement tool may be connected to the non-consensus on the definition of the concept (Kantur and Arzu 2012). Specifically, the literature review chapter found no research on how to measure resilience in relation to SMEs in a DC context (Linnenluecke 2017). The development of an empirically tested way to measure resilience was an identified need.

Usage of theory: A resource-based view and resource orchestration theory

The resource-based view (RBV) theory was developed as a theoretical approach and is used relatively frequently. In entrepreneurship research, it has dominated the literature over the last few decades (Alberti et al. 2018, Abylaev et al. 2014). In the discussion following this literature review, resource orchestration theory was chosen as a successor of RBV for use in this study. This choice also honors Tognazzo et al. (2016) suggestion that RBV (and, thus, ROT) is the most appropriate theory in framing the study of SMEs. Another statement underpinning the choice of a resource-based approach is that resources are desirable to advance companies' competitive advantage, and thus, resilience, especially in resource-scarce environments (Acquaah et al. 2011). Possessing resources with such attributes can help SMEs survive when a disruption occurs (Lengnick-Hall et al. 2011). Specifically, ROT was selected as this theory incorporates dynamics and the entrepreneurial perspective (Sirmon et al. 2011); (Hitt et al. 2011). We noted that no published research has employed ROT to analyze SME resilience, thus creating a gap to be filled by future research.

Factors influencing resilience and their interactions

Literature regarding factors influencing SME's resilience development was judged to be fragmented and inconclusive. Factors were inventoried and classified into personal or entrepreneurial, firm or organizational, and into a broader business environment. We also showed the importance of the interaction effects of these factors to explain the resilience of SMEs. In this research, a selection of the factors mentioned was selected; entrepreneurial orientation was selected as the main variable, and types of resources, social networks/ties, business environments, gender, firm size, and their interactions will be taken into account.

The research on how SMEs overcome unfolding, disruptive, and challenging circumstances in the currently evolving turbulent environment lays a foundation for resilience theory within the context of entrepreneurship and management studies. DCs are depicted as resilience research's most demanding environment (Branzei and Abdelnour 2010). Thus, the relevance of research into the resilience of SMEs in DCs, including its theoretical and methodological approach, was derived from the literature overview in Chapter 2.

Research Question 2 (Chapter 3)

As a robust resilience measurement scale is a prerequisite to generating reliable information on how to foster sustainable SMEs, the following research question was formulated:

Research Question 2: What dimensions are used to measure the resilience of these SMEs?

The starting point for developing the measurement scale was the multidimensional concept of resilience as referred to in Chapter 2 (i.e., assessing firms' performance growth and their ability to adapt and seize business opportunities in a challenging environment). The robustness of the measurement scale is tested in a challenging business environment. This environment is typical for DCs, including Ethiopia, and in which SMEs represent an environmentally vulnerable but socioeconomically relevant group of companies to cope with such an environment. This kind of environment is, generally, underexplored in the resilience research. A confirmatory factor analysis (CFA) and an invariance test were applied using survey data generated from 408 Ethiopian non-farm SMEs.

The statistical findings shown in Chapter 3 revealed multidimensionality of SME resilience in a challenging context (Williams and Vorley 2017, Ortiz-de-Mandojana and Bansal 2016, McManus et al. 2008). The three dimensions found in the literature were confirmed empirically. We also proved the invariance of the measurement by considering the gender of firm owners and found the measurement, in this regard, to be robust (Nam et al. 2016).

Research Question 3 (Chapter 4)

In the literature, the gathering of resources needed for business operations has been a critical topic in the entrepreneurship and SME domain for a long time (Kim et al. 2017, Shane 2003). Firm resource acquisition is a necessary condition and tends to be considered the most challenging for small companies (Classen et al. 2012). Understanding the mechanism by which firms acquire resources is covered by the primary stage in ROT (Stoyanov et al. 2018). Scholars (e.g. Huang and Wang 2013, Lumpkin and Dess 1996) argue that a firm's entrepreneurial orientation (EO) influences resource acquisition in a resource-constrained setting. We argue that firms with higher EO are more likely to succeed in resource-gaining tasks from outside environments (Jiang et al. 2018). EO resource acquisition is contingent on external environments (Huang and Wang 2013). Social networks are a source of business intelligence (Kotha and George 2012), which moderates the EO and firm resource acquisition relationship (Gulati and Gargiulo 1999).

Research Question 3: What is the role of EO and social capital in SMEs' resource acquisition to achieve resilience?

The findings of this thesis confirm the prior theorization and yet empirically unsupported supposition on EO's importance in firm resource acquisition as reported by, for example, (e.g. Lumpkin and Dess 1996, Huang and Wang 2013, Huang et al. 2010). In Chapter 4, we examined how different types of social capital or social networking (i.e., business versus social) serve as different types of configurational moderators between EO and resource acquisition. This study finds that having closer social ties enhances the EO resource-acquisition relationship, which is in line with previous studies (e.g., Boso et al. 2013, Berrou and Combarous 2012, Khayesi et al. 2014) that found social ties, as a resource, are primarily composed of kinship or family ties that enable an entrepreneur to raise resources.

Research Question 4 (Chapter 5)

Acquiring resources is a primary action in ROT, but it is an insufficient condition to construct and maintain firm resilience (Sirmon et al. 2011, Hughes et al. 2018, Hitt et al. 2011). To develop resilient firms, the acquired resources must be mobilized, deployed, and orchestrated to create value (Miao et al. 2017). In doing so, we regard EO as the resource-mobilizing vision and actions that leverage them (Chirico et al. 2011) to construct and achieve firm resilience. Chapter 5 elaborates how EO drives these orchestration processes to achieve a higher degree of firm resilience. More precisely, considering ROT (Sirmon et al. 2007, Sirmon et al. 2011), we examined a model in which EO mediates the relationship between firm resources and firm performance. We also investigated gender differences in EO-supported resource bundling and leveraging behaviors (Kreiser et al. 2010).

Research Question 4: Does EO drive the use of resources to achieve SME resilience? Is there a gender difference in EO?

Chapter 5 described the structural equation analysis with partial least square regression and moderation analysis. We found that entrepreneurs with high EO can utilize acquired human capital, social capital (business and social ties), and physical capital resources to achieve business resilience. This chapter opened the ‘black box’ in the sense that we identified EO as a driver for the deployment of resources to improve performance (Sirmon et al. 2007). This finding is in line with Sirmon and Hitt (2009) findings that deploying sophisticated resources in sophisticated markets while deploying more straightforward resources in simple-service markets allowed managers to increase the value extracted from investment in human resources, ultimately resulting in superior financial firm performance.

We also deployed multi-group analysis tests to investigate gender difference in EO’s converting acquired resources into improved performance. Results support that the EO of female entrepreneurs more strongly mediates converting human capital and social ties into increased resilience than their male counterparts. However, male entrepreneurs’ EO more strongly mediates physical resources than female entrepreneurs’ EO. These results are interesting against the background of the existing hypothesis that male entrepreneurs are more entrepreneurial than females when considering their

social burden and home care tasks, which could significantly constrain their social and entrepreneurial activities (Runyan et al. 2006, Brixiová and Kangoye 2016). Moreover, the business environment negatively influenced EO, which is in line with the contingency-based hypothesis.

Research Question 5 (Chapter 6)

After gaining insight into the entrepreneurial acquisition and usage of resources aimed at building resilience, the next part of this study focused on entrepreneurial efforts that benefit family livelihood due to increased business resilience. Resource scarcity and the resource-demanding challenge of maintaining firm resilience can call into question the potentially positive relationship between resilience and contributions to family livelihood. The focus is on the extent to which entrepreneurs benefit, in terms of family livelihood, directly from their business resilience and how entrepreneurs try to safeguard the conversion of part of this business resilience into family livelihood. The research question, therefore, concentrates on how entrepreneurs construct their family's livelihood.

Research Question 5: To what extent do entrepreneurial survival strategies influence the transformation of SMEs' resilience into a contribution to family livelihood?

The analysis, which utilized hierarchical regression analysis, confirmed that (1) business resilience is positively related to family livelihood, and (2) income generated from farming, off-farm and non-farm activities, business location and finance source (i.e., private microfinancing) positively moderate the relationship between business resilience and family livelihood. By confirming the existence of this positive relationship, this study's results are consistent with the work of Mozumdar (2018) on female entrepreneurship in Bangladesh, a country profiled as being turbulent for businesses and resource-scarce. Based on the result, we argue that fueling firm resilience is vital to improve living conditions and alleviate the pervasive poverty problems facing developing countries like Ethiopia (Littlewood and Holt 2018).

Although we confirmed our assumption regarding the moderators (i.e., income generated from other sources, business location, and financing source), we did not find confirmation for the moderating role of investment amount and business sector choice on the relationship between firm

resilience and family livelihood. Therefore, seemingly, we can say that the value of firm resilience is positively related to family livelihood, and this relationship is much stronger for those firms operating near the center markets and main roads and receiving credit services from a private microfinance institution. In addition to business resilience and the moderating factors, income from other sources was also proved to contribute to the entrepreneur's family livelihood.

7.3 Overall conclusions

In the phase of drawing the conclusions and discussing the results, we return to the origins of this research because the origins of a research project shape its conclusions and discussion. This study was conducted against the background of acknowledging entrepreneurship is vital to poverty reduction³³ (Ács et al. 2011, Bruton et al. 2013, Möller 2012, Ramswamy and Kumar 2013). Given this societal-impact theme, Bruton et al. (2013) critically observe that the ‘entrepreneurship literature has historically shied away from issues involving poverty’ (p. 683). They suggest that scholars must pay due attention to entrepreneurship research in developing countries where poverty is a significant challenge (Bruton et al. 2013). The strong paradox of the felt need of entrepreneurship in developing countries and the particularly unfavorable circumstances for people to engage in entrepreneurship, specifically for SMEs, depicts the high demand of social impact-based and resilience-based research in this type of country (Littlewood and Holt 2018, Branzei and Abdelnour 2010). This gives way in the current study to approaching the issue of family livelihood as an entrepreneurial effort (instead of a governmental effort) by following the motto that business resilience in itself is not an entrepreneurial goal but a means.

‘Entrepreneurship as a vital driver’ also stimulated the emphasis, in the theoretical framework, on entrepreneurs as agents, as active people that construct through their ‘praxis of knowing and doing of anticipating and acting’ (Fuller 2000), impacting both business resilience and family livelihood: the entrepreneurial construction of business resilience and family livelihood. The agency perspective of entrepreneurship in this study not only presented itself in using the concept of ‘entrepreneurial orientation’ but also in deploying ROT and introducing survival strategies with which the relationship between firm resilience and family livelihood is meant to be entrepreneurially strengthened. EO is used to clarify the direction of entrepreneurial activities

³³ *The World Bank defines the poverty level for developing countries as individuals living on less than \$2 per day (Bruton et al. 2013).*

(Miao et al. 2017). ROT is used to gain detailed insight into how entrepreneurs gather and use resources to conduct their activities. Sirmon et al. (2007) hint at the need to investigate these consecutive resource orchestration processes to open the ‘black box,’ noting the structuring (i.e., acquiring) of resources in the start-up phase (Sirmon et al. 2011, Sirmon et al. 2007). Lastly, survival strategies were incorporated to study the assumed active entrepreneurial safeguarding of the transformation of business resilience into a family livelihood. So, what are the conclusions on the questions if such an ‘active-construction approach’ supports the practical insights in reducing poverty by entrepreneurial efforts and, theoretically, adds to the body of knowledge of entrepreneurship? Before we move on to the last question and proceed to the practical implications, the methodological prerequisite of this study to define and determine a robust measurement scale needs to be discussed.

‘Seizing business opportunities’ as part of SMEs resilience definition and conceptualization

By adding ‘seizing business opportunities’ as a third dimension to the concept of resilience, one could say that a genuine aspect of entrepreneurship was introduced to the concept of resilience. ‘Adaptability’ and ‘performance growth’ seem to be in line with the original idea underlying resilience as a concept used to understand how phenomena and, specifically, from a business perspective, firms survive disruptions. ‘Seizing opportunities,’ as the third dimension, methodologically and theoretically contributes, specifically, to entrepreneurial agency in the resilience concept.

Robust resilience measurement of SMEs

This three-dimensional resilience concept, which includes the entrepreneurial agency dimension to resilience, was then tested in an environment that is seemingly unfavorable for entrepreneurs: resource-scarcity not only for entrepreneurs but also for their markets (i.e., consumers/customers). The empirical confirmation of ‘seizing opportunities,’ as the third resilience dimension, also emphasizes the agency of entrepreneurs in such business environments and adds to our understanding of how firms achieve resilience. Although research on SMEs’ resilience in extremely vulnerable settings is lacking, this result, in conceptualizing resilience, shows the value of following an agency approach to lay a foundation for theorizing on SMEs’ resilience in vulnerable circumstances.

Structuring (acquisition) phase of ROT, EO, and social network importance

EO is theoretically positioned and empirically confirmed as the vital driving force for firm resource acquisition in a resource-constrained, demanding environment. Our analysis confirmed that in developing firms, EO is essential to resource acquisition in a resource-scarce setting. However, the EO-firm resource acquisition relationship does not happen in a vacuum. Various factors may moderate the turbulence relationship. Among others, social ties strengthened the relationship in this context; hence, to optimize the value of EO for resource acquisition, SMEs appear to require networking to gather resources and assistance. This result also underpins the agency idea of an entrepreneur who activates a firm by selecting resources and using aspects of the business environment to support the gathering of resources.

Use of resources: ROT, EO actions, and gender roles

To maintain firm resilience, the acquired resources must be bundled (i.e., mobilized) with capabilities and leveraged for use to generate higher value. If resources are not changed into capabilities, business processes, or value, companies cannot become resilient, which is crucial in turbulent environments (Akgün and Keskin 2014, Alberti et al. 2018). Managing the conversion of acquired resources into capabilities and value is critical to attaining and maintaining firm resilience. This dynamic agency view of resource deployment emphasizes the role of entrepreneurs (Helfat 2007, Sirmon et al. 2007). EO is posited as instrumental for the implementation and realization of bundling and leveraging actions. In Chapter 5, based on our empirical investigation, we concluded that EO is related to mobilizing resources and boosting business resilience, although it is hampered by disruptions in the business environment. EO is demonstrated by managerial acumen and volitional acts of bundling and leveraging resources into business resilience, which means EO can synchronize the bundling and leveraging processes of ROT, from entrepreneurial and strategic management perspectives, to develop a useful business model in a resource-scarce setting.

The last few decades have seen a rising number of studies concerned with the role of gender in entrepreneurship and EO (Lim and Envick 2013, Shinnar et al. 2012) as the number of females engaged in entrepreneurial activities has increased. According to Mueller and Dato-on (2010), female entrepreneurs have played a significant role in the economies of many countries in the world, including developing countries, although their failure rates are the highest in the world. The difference is related to women's societal position and work-family related role differences

hindering their EO actions (Rijkers and Costa 2012). ‘Gender’ is seen to reflect the possibilities and constraints female entrepreneurs face in enacting their managerial capabilities due to their social and cultural position. Relatively less attention has been paid to gender differences in EO from the perspective of resource bundling and leveraging. This resource orchestration study conducted in Ethiopia proved that gender moderates the relationship between EO and resources, as well as between resources and business resilience. Female entrepreneurs are better than male entrepreneurs, specifically, in bundling human capital and social ties resources, and their EO outperforms male their counterparts in boosting business resilience even though the business environment for females is harsher than for male entrepreneurs in developing countries (see Chapter 5). Thus, this underpins the agency perspective in this study in two ways. First, EO drives the use of acquired resources to create a positive effect on business resilience. Developing firms’ EO is vital for the realization and implementation of resource bundling and leveraging processes, a means to create resilient businesses; or, in other words, differences in firm resilience in the resource-scarce, turbulent settings. Second, gender was proven to be an influential factor in the resource orchestration process: females use resources more effectively than males. In this thesis, the prevailing notion that males are better at entrepreneurship than their female counterparts was disproved. Despite societal barriers women face in small business, raised by socialization practices and family roles, females entrepreneurs were found to be more entrepreneurial and effective resource orchestrators than their male counterparts. They are more effective at mobilizing certain resources (i.e., human capital and social ties) and in their overall usage of resources (i.e., are better able to leverage capabilities to value) than their male counterparts.

Firm resilience, family livelihood, and survival strategies

Entrepreneurship is a means for survival and a livelihood in developing nations. Converting the value of firm resilience into family livelihood is another in need of research attention that was addressed in this thesis. Scant research, thus far, has investigated this topic (Mozumdar 2018). Additionally, turning firm resilience into family livelihood requires supportive strategies (e.g., investment amount, income from other sources, selecting the business sector, business location, and sources of financing). In this thesis, we tested whether firm resilience has family-livelihood benefits and whether these benefits can be strengthened if entrepreneurs able to generate additional income from other sources, choose a central location, and obtain loans from a private institution

rather than from government-subsidized microfinancing institutions. Thus, we concluded that family livelihood could be viewed as an entrepreneurial effort through achieving business resilience and supporting the conversion of resilience into family livelihood by enacting survival strategies.

Better understand why some firms are more resilient and contribute more effectively to family livelihood.

This study provides five explanations that provide a better understanding of the differences between companies in achieving business resilience and a greater contribution to family livelihood:

- Adding the third dimension of ‘seizing business opportunities’ contributes to our insight into how entrepreneurs approach the resilience challenge.
- Entrepreneurial orientation activates resource acquisition and boosts the use of resources; as EO increases, so does performance.
- More specifically, women were proven to be more entrepreneurial than men: they seem to be more effective in their use of resources than men.
- Activating social ties positively influences the acquisition and use of resources.
- Well-chosen survival strategies strengthen the conversion of firm resilience into family livelihood.

Despite unfavorable circumstances, resilience and contributions to family livelihood are possible through entrepreneurial efforts. This research does not support skepticism regarding SMEs’ role in livelihood development and poverty alleviation; instead, it supports the pro-SME argument.

7.4 Contributions to the body of knowledge

In terms of theoretical contributions, this study developed and tested a theoretical model combining resources, resource orchestration processes, EO, and resilience in a comprehensive manner that had not been done previously.

First, this thesis contributes to the existing body of knowledge in the SME-oriented resilience literature. It provides a fund of knowledge in the areas of definitions, measurement, and core factors influencing SMEs’ resilience development. The study applied a systematic literature review approach. This approach was chosen to identify guidelines for engaging resilience research (see

Tranfield et al. 2003). As described in Chapter 2, it was identified that research on the resilience of SMEs has gained considerable academic attention. Despite such rising attention, understandings of the concept lack uniformity, and there is a dearth of research on robust SMEs' resilience measurement in the literature. This study was undertaken to address this problem by structuring the extent studies in the field of SMEs.

This thesis also advances our knowledge of resilience of SMEs from specific event-based (i.e., discrete) disruptions to resilience within persistent turbulent conditions. These conditions are particularly common in DCs. This thesis suggests that it is not sufficient to characterize resilience capabilities that can be activated in the face of specific event-based disruption; attention also needs to be paid to persistent turbulent situations facing companies in the DC context. Small businesses in DCs face more complex, extremely chaotic situations, and require more resilience research attention (Kantur and Say 2015). Following this line of argumentation, this thesis contributed to the definitional debate on the resilience of SMEs by considering persistent, complex interruptions, predominantly, the ontological nature of resilience capability (see Manfield and Newey 2017). The resilience of SMEs is delineated as a multidimensional phenomenon (Ponomarov and Holcomb 2009) that is expressed through firms' performance growth, adaptation (characteristics of firm adaptability), and seizing business opportunities (ability to turn challenging situations into business opportunities). These dimensions, when combined, emphasize that the term resilience is a desirable characteristic that describes how firms overcome present and future disruptions (Linnenluecke 2017), indicating that resilience can also be nurtured and developed over time (Somers 2009).

A lack of robust resilience-measurement tools hinders the progress of quantitative research on SME resilience (Williams and Vorley 2017, Linnenluecke 2017). To fill this gap, this thesis contributes to the body of knowledge regarding business resilience measurement by developing a robust instrument that can be used to assess the resilience of SMEs operating in the midst of persistently disruptive business environments. The process of developing a robust scale contributes to quantitative research on SME resilience. By doing so, our study expands and extends the scope of the literature on SMEs resilience as highlighted in the literature review in Chapter 2. Based on adaptation, growth, and the ability to seize business opportunities, a multidimensional resilience measurement for SMEs in the DC context is built and tested empirically.

Second, this thesis contributes to the emerging yet empirically under-researched theory of resource orchestration (ROT), involving sequential actions and processes: (1) structuring resources and (2) bundling and leveraging them into capabilities and value to strengthen a firm's resilience (Sirmon et al. 2011). A firm's entrepreneurial orientation (EO) is a key instrument in the realization of these ROT processes (see Miao et al. 2017, Huang and Wang 2013, Hughes et al. 2015). Prior research exploring various resources and capabilities to construct firm business resilience has provided sparse and inconsistent results (see Chapter 2). Few scholars have empirically examined such a role of EO in driving resource structuring and usage, as well as its relationship with resilience (Hughes et al. 2015). Here, these are missing links that are critical to understanding how resources can create business resilience for firms in a resource-scarce setting (Alberti et al. 2018). Therefore, our research on ROT processes driven by EO is important as it sheds light on these missing links by examining how these subsequent processes strengthen business resilience (Sirmon and Hitt 2003).

This research on ROT, also referred to as RO processes, was strategically positioned in the context of SMEs. Organizations like SMEs face a series of challenges associated with limited resources, such as physical capital, information, and human capital that pose constraints on their development of resilience (Ingirige et al. 2008). To advance this debate on the seemingly paradoxical setting of vulnerable companies in resource-scarce circumstances striving for resources and resilience, we deployed the resource structuring, bundling, and leveraging components of ROT driven by EO (see Chapter 4 and 5). To overcome resource acquisitions and resource-use challenges, this thesis proved that EO-driven ROT fosters resilience. In doing so, it sheds new light by providing answers for a grand research question in the entrepreneurship and management domain: What makes one firm more successful than another, and how can we build resilient companies?

Third, the thesis adds empirical richness to Sirmon et al. (2011) generic resource-orchestration process model and generates new insights into the foundation of knowledge of the ROT in a real-world setting (Miao et al. 2017). This thesis also makes a significant contribution to the EO literature by successfully examining EO's impact on resource-orchestration processes.

Additionally, this thesis contributes to the advancement of social networking theory as it relates to EO. (Huang and Wang 2013). Social capital positively moderates the relationship between EO,

resource acquisition, and resource usage. Although recent literature has explicitly recognized the importance of distinguishing the different types of social networking (i.e., business vs social ties; see Chapter 4), the empirical results of these types of networking are still inconclusive and vary depending on the context (Coffé and Geys 2007, Boso et al. 2013). This thesis takes a step to resolve this issue by analyzing the moderating role of business ties and social ties on the realization of EO-driven resource structuring, especially acquisition. In this line of argument, this thesis also contributes to the importance of social capital, essentially, social ties as resources (Khayesi et al. 2014) for augmenting the EO-resource acquisition linkage in a resource-scarce setting like Ethiopia.

Fourth, this thesis empirically underpins the ROT assumption that gaining resources is a necessary but insufficient condition to create a competitive advantage. Indeed, the gained resources must be mobilized and effectively utilized for their value-creating potential to be fully reached. Thus, managerial actions play an important role (Sirmon et al. 2007, Sirmon et al. 2011).

Fifth, this thesis contributes to the existing debate on gender roles in entrepreneurship in general and their entrepreneurial actions (Goktan and Gupta 2015, Minniti and Naudé 2010, Hughes et al. 2012). The disadvantaged position that female-owned firms have compared to their male counterparts is a common theme in discussions of entrepreneurship and business performance (Shaw et al. 2009, Rijkers and Costa 2012). Authors frequently point to the barriers women face in entrepreneurship, which are raised by socialization practices and women's heavy burden of home and family responsibilities. Basically, they seem to be in the position of not having enough time to devote to entrepreneurship (Ahl 2006, Watson 2002, Lim and Envik 2013). Disadvantages experienced in these areas make women less entrepreneurial, which has, as is largely assumed, resulted in their higher failure rates and lower growth rates (Brixiová and Kangoye 2016, Rijkers and Costa 2012). Challenges faced by female entrepreneurs in DCs are assumed to be more difficult (Minniti and Naudé 2010) than in more developed countries; however, these assumptions are rarely scrutinized empirically (Lockyer et al. 2018). We extended this debate to SMEs in Ethiopia. Contrary to the assumption, female entrepreneurs were found to be more effective in mobilizing the resources of human capital and social ties than their male counterparts despite facing more challenging circumstances and discrimination in these traditional societies. They were also found to be more effective in the use of resources (i.e., are more capable of leveraging capabilities into

value) than their male counterparts. In this thesis, the assumption that women are less entrepreneurial (i.e., women are less capable at resource orchestration as summarized in the ‘female firms’ under-performance hypothesis’ (Watson 2002, Ahl 2006)] is rejected. This study contradicts the notion that entrepreneurship is male-dominated (Ahl 2006) and appreciates the resource orchestration capability of women in the resource-scarce, business-challenging societies (Rijkers and Costa 2012, Mozumdar 2018). The results of this thesis could be used to empower female entrepreneurs who are presently running and planning to start a new business venture to not get discouraged by a false belief that ventures owned and initiated by women are less likely to succeed than those owned and initiated by men.

Sixth, this thesis contributes to the understanding of the dynamic, processes oriented, and sequential approach to strengthening firm resilience in resource-scarce, turbulent business environments. This is realized through stressing that, generally, developing or having a high EO is a crucial strategy for the implementation of resource orchestration steps and is vital to making SMEs more resilient in resource-scarce settings. EO is broadly characterized, in this study, as a managerial philosophy that advocates dynamic firm resource-management to achieve the desired goals (Lumpkin and Dess 2001, Lumpkin and Dess 1996, Huggins and Thompson 2015). High levels of EO encourage firms to mobilize, efficiently use, and convert resources into capabilities and value, enabling firms to be competitive and resilient; EO sets the rules of the game for resource orchestration steps implemented in a real-world setting (Miao et al. 2017). One conclusion is that building resilience requires the process-oriented strategic management of resources. By providing a systematic process framework (i.e., ROT) for how SMEs achieve a competitive advantage and firm resilience, this thesis contributes to a dynamic approach (Sirmon et al. 2007) to managing resources.

Seven, by combining resilience, strategies, and family livelihood (see Chapter 6), this thesis adds to the process of linking the value of firm resilience to family livelihood. The thesis clarifies that resilience is not, itself, an end goal. To underpin this assertion, we researched its linkage with family livelihood conditions. In investigating the conversion of resilience into improved family livelihood, this thesis emphasized entrepreneurs' agency as the center of analysis by tapping into accounts of entrepreneurs' use of supportive survival strategies, such as selecting funding sources and the business location. Hence, we extended and contributed to the idea initiated by Sirmon and

Hitt (2003) and Hitt et al. (2011) to non-farm forms of SMEs, linking various types of firms' resources and their management, survival strategies, and family livelihood synergistically to reduce poverty in the DC context.

Finally, the literature on SME resilience, as well as the broader entrepreneurship literature, until now, has paid scant attention to the poor and, particularly, to the sidelined entrepreneurial activities of, for example, female-owned firms in DCs (see Rijkers and Costa 2012). This is despite growing evidence that such entrepreneurial activities in these settings play an important role in the economy and in livelihood improvement (Page and Söderbom 2015). This thesis advances the notion of linking resources, resource orchestration processes, EO, and gender differences in EO-driven activities (Sirmon et al. 2007, Hitt et al. 2011, Miao et al. 2017, Lim and Envick 2013) to achieve resilience in resource-scarce environments.

7.5 Limitations and recommendations for future research

Although this research propagates a dynamic perspective by starting from entrepreneurial agency by deploying ROT, EO, and survival strategies, the research methodology is static. Due to financial and time limits, we could not compare results across periods. Even though we used statistically regressive techniques, such as a confirmatory and invariance, for example, to develop the resilience construct, the consideration of time would help in terms of checking the consistency of the firms' responses to disruption and the results. A series of measurement points would have enabled us, as researchers, to focus on the investigated relationships per measurement time slot and compare results. Thus, future researchers can apply a longitudinal approach to address this limitation. A longitudinal approach could also include differences between baseline resources and resources that are accumulated over time. According to Shane and Stuart (2002), some entrepreneurship studies have found that baseline resources have a long-lasting effect on a company's performance (Baron and Hannan 2002). The authors point out that initial resource endowments lack proof due to the struggle in obtaining information on the early phases of a new enterprise's life. As researchers consider that initial resource-stocks dissipate and evolve rapidly (Bruderl and Schussler 1990), the lack of information on evolving resources can be seen as a drawback of the thesis. The cross-sectional nature of data collection may have resulted in biased results. As the variables were measured at a single point in time, it does not necessarily infer the direction of associations, which

has to be inferred from the results. As stated, a longitudinal method of data collection that includes the accumulation of resources over time would provide results that are more consistent.

In this research, we looked at SME resilience in a single country (i.e., Ethiopia). This may restrict the generalizability of these findings. A study with significant sample sizes from different countries could present more conclusive results that can be generalized across different contexts. Therefore, future research could adopt this study and broaden its implications by increasing the geographic range of the sample population. Nevertheless, this study has provided a portrait of SME resilience in Ethiopia that is reflective of SMEs in other DCs, such as Kenya.

While this thesis provides an empirical analysis that encompasses resource structuring (i.e., acquisition), resource bundling, and leveraging phases, it does not study these processes and their subprocesses in detail. Each of these processes or phases has subprocesses. For example, resource structuring activities include resource-acquiring, -accumulating, and -divesting sub-processes (Sirmon et al. 2007). This research also does not consider the synchronization and configuration of these core and subprocesses. Future research could analyze the entire three-step process and its sub-processes, as well as their synchronizing mechanisms. This might help us develop a broader understanding of the relationship between resources and firm resilience. Future studies may also offer promising extensions of this research by further expanding the different forms of resource orchestration processes, which could provide insight into the construction of SMEs' resilience.

In general, there are limitations regarding the objectivity of data gathered from survey questionnaire methods. Although this thesis took all the precautionary steps to reduce the possibility of response bias and tested the possibility of common methodological biases (Podsakoff et al. 2003), there may still be some bias in the responses generated from the survey. The present study relied on the owner/entrepreneurs' perception of their firm's resilience relative to their competitors and the business environment. Thus, the data obtained were based on the owner/entrepreneur's perceptions. The result might have been different if the data were based on secondary firm-performance data. Thus, we call for future research to consider this limitation and deploy secondary data.

Interestingly, and contrary to the assumption of the conceptual model employed in this study, female entrepreneurs were found to be in a better position to manage and use resources than their

male counterparts. This relationship can be explored more fully in future research to better understand the ramifications. However, overall, this research has shown that Ethiopian SMEs practicing resource-orchestration processes do reap benefits in the form of improved firm resilience. With this finding, the study has achieved its objective.

As a statistical approach (Chapters 4 and 5), we used partial least squares structural equation modeling (PLS-SEM) with SmartPls 3.7 software (Khosravi 2017) for this thesis. PLS-SEM proves particularly beneficial in this respect as it allows estimating complex relationships, is capable of handling data inadequacies, such as non-normal data, and accommodates formatively measured constructs, the latter of which has recently gained increasing prominence in a variety of disciplines (Hair et al. 2013, Hair et al. 2011); however, this type of modeling has limitations. Moreover, as a universal fit measure, SmartPLS lacks a universally accepted goodness-of-fit criterion that would allow the evaluation of various models.

7.6 Research Implications

Our study also provides insights into SMEs' resilience development in the resource-scarce, turbulent business environment in Ethiopia. We claim it can guide public officials (e.g., SME development agencies), microfinancing institutions, practitioners (e.g., chambers of commerce), businesses, and other constituents in developing and implementing strategies designed to enhance the development of SMEs.

For policymakers

Promoting the development of SMEs and their business resilience in chaotic business settings through the strategic management of resources marks a shift from the traditional paradigms of SME development and poverty reduction strategies. While traditional development strategies involve advancing SMEs' access to financing through subsidizing microfinance institutions, we argue these efforts are essential, but equally focus needs to be placed on to the resource orchestration processes in which resources are converted into value. This extension of the developmental focus could support efforts to reduce poverty and could be achieved more effectively through SMEs.

Generally, the thesis implies that the implementation of these subsequent RO processes, in combination with EO, provides direction for creating resilient SMEs in resource-scarce, demanding environments. This thesis, therefore, offers policy-guiding information for institutions engaged in

supporting SMEs to avoid focusing solely on access to resources, such as access to funding, and instead, work on entrepreneurial processes, building entrepreneurial capability (i.e., EO) to enable entrepreneurs to acquire and effectively utilize the acquired resources to attain firm resilience and a stable livelihood. Hence, this thesis has confirmed Hansen et al. (2004) suggestion that what a firm does with its resources is at least as important as the resources accessed. Moreover, constructing and achieving firm resilience is challenged by multiple dimensions that increase the need for the practical coordination and integration of policy interventions. Hence, policymakers should adopt a systemic approach to improving their understanding of the interconnected nature of technologies, governance levels, infrastructures, organizational practices, and other factors in a particular location a basis for integrated decision-making and synchronized resource-orchestration actions. Designing well-integrated entrepreneurial processes and supportive survival strategies help to direct firm resources towards greater resilience and family livelihood.

This research has shown that resource possession alone is insufficient for developing a sustainable competitive advantage. The concept of resource bundling and leveraging actions in ROT have been shown to mediate the relationship between resources and firm resilience. More specifically, entrepreneurs' strategic management and exploitation of existing resource bundles is the key to strengthening SME resilience. Thus, policymakers and managers should also be aware of implementing EO-based resource orchestration strategies based on knowledge of their existing resource base. Hence, decisions should be made with an awareness of the strengths and weaknesses of the firm's current resources.

Lastly, this research evidenced that female entrepreneurs are better at orchestrating scarce resources to produce value than their male counterparts in the context of DCs, which implies gender differences in resource orchestration processes, primarily resource bundling and leveraging, should be kept in mind when promoting entrepreneurially-oriented actions and practices within SMEs in the context of DCs. For policymakers, this turns the spotlight on the need for an integrated approach to fostering female entrepreneurship as a strategy for poverty alleviation by addressing institutional factors, social structures, and gender-biased approaches in this context.

To sum up, policies seeking to address poverty should consider the potential contribution of SMEs to family livelihood. Entrepreneurship policy capitalizing on EO education, especially female-

owned companies, may enable entrepreneurs to unleash their full potential in achieving poverty reduction, should be focused on in such a context.

For researchers

Specifically, this thesis offers the following important implications for entrepreneurship researchers who are focusing on SMEs. The clarity of the resilience concept's conceptualization and the robust measurement instrument developed in this study provide an important avenue for further research to improve our currently fragmented understanding of the concept. While previous research has tended to focus primarily on resilience theory building, this study develops empirics that provide a promising avenue in the future to capture the reality of SME resilience. Future researchers should seek to develop this concept by testing the measurement tool in a similar context, such as in Kenya.

For entrepreneurs

Our findings also offer practical implication for entrepreneurs. Understanding resilience and the processes undertaken to build resilient companies can support entrepreneurs in planning, guiding, and fostering their firms to achieve a higher level of resilience and, in turn, increase the contribution to their families' livelihood. Therefore, the firm's owner must implement these sequential resource-orchestration processes. This research informs entrepreneurs, especially, on the need to (1) acquire resources, (2) transform them into capabilities, and then (3) convert these capabilities into value. Therefore, firm owners need to identify and acquire the most suitable resources, develop capabilities, and convert the formed capabilities into value to achieve firm resilience. To do so, developing EO is a desirable strategy because it proved a vital driving force in realizing the processes and sub-processes involved in ROT. Small firms operating in DCs are often challenged by a lack of resources to further their development; hence, EO could enable them to overcome the limitations and weakness of formal institutional environments in DCs to access needed resources and use them. Firm owners/entrepreneurs who want to orchestrate their resources and strengthen their firm's resilience in this context must develop EO capabilities across various organizational boundaries (Berseck and zu Knyphausen-Aufseß 2018). Social networking is also a valuable strategy that entrepreneurs need to consider, in combination with EO, especially for resource acquisition in the DC context. Our work provides a useful roadmap for entrepreneurs to anticipate

the challenges and use scarce resources more efficiently to ensure the firm's long-term survival and growth.

Furthermore, for female entrepreneurs, this research gives insight into the challenges they face in the interplay of RO processes, EO capability, traditional cultures and social structure obstacles that affect their enterprises' development. Finally, our findings suggest that although resources are instrumental in maintaining firm resilience, a firm manager must efficiently bundle and use an organization's resources for an advantage to be realized. Unquestionably, entrepreneurs must develop the organization's EO to support resource acquisition, mobilization, and usage, leading to greater business success.

For governments and SME-supporting institutions

In many developing countries, including Ethiopia, SMEs are viewed as engines for employment and poverty alleviation. Accordingly, governments have begun paying special attention to the needs and potential of these organizations by developing support mechanisms, such as 'incubators' and microfinance loans. The results of this study suggest that governments might also do well to offer mechanisms that facilitate entrepreneurs' resource-orchestration capabilities through training, experience sharing, and networking to improve their organizational EO in navigating the complex environmental conditions and resource-scarcity problems they encounter. Both formal (on e.g. marketing, bookkeeping, purchasing) and informal courses (e.g. organizing sessions for entrepreneurs to learn from each other) on entrepreneurship can enrich the entrepreneurial decisions and management.

Ethiopia remains trapped in poverty and food insecurity. The growing problem of youth unemployment is another major challenge facing the country. To improve these circumstances, harnessing the resilience of SMEs can be considered a vital strategy. SMEs in resource-scarce settings need to continuously develop their EO to bundle and leverage resources (Sirmon and Hitt 2003) so that they can achieve a competitive advantage and strengthen their resilience. Governmental investments in industrial parks nearby cities, harbors or other transportation hubs can be beneficial following entrepreneurs own reasoning for choosing certain locations. Notably, what we have concluded after conducting this research is that females are more effective resource orchestrators than their male counterparts, and if they properly implement EO in realizing RO

processes, they can be more successful companies in the midst of turbulent business environments. This conclusion further contributes to the idea of supporting the development of women's EO as a vital direction for grassroots-level economic development and poverty alleviation in DCs like Ethiopia. The government and institutions supporting SME development must pay due attention to stimulating female entrepreneurship as this may boost their role in poverty reduction in Ethiopia.

Summary

Overview

Currently, building resilience of small and medium-size enterprises (SMEs) in developing countries (DCs) is a key topic in academic and policymaking circles. However, very little research has been conducted on strategies that strengthen the resilience of SMEs. It is an undisputable fact that SMEs, and especially non-farm enterprises (Nagler and Naudé 2017), could play a crucial role in poverty reduction in the context of DCs. Entrepreneurial activities offer the best opportunity to create substantial positive change in the livelihood of millions of people within such settings (Bruton et al. 2013). Evidence of their significance can be found in their contribution to household income (Haggblade et al. 2010) of a country's GDP, and employment (Dalberg 2011, Gunawan 2015). In DCs, these firms are also seen as essential for the expansion of industries, rural innovation, and job creation, as well as an alternative means to free impoverished people from the vicious cycle of poverty (Haggblade et al. 2010, Page and Söderbom 2015). These facts prove that SMEs are a driving force in the socioeconomic stability of countries, especially for the present alarmingly growing youth population (Gunawan 2015). However, despite such a promising role and the rising number of people engaged in these activities, their failure rates are also reportedly the highest in the world (Page and Söderbom 2015). This is due, primarily, to turbulent, resource-scarce circumstances in their business environments. Thus, further research providing better insights into how the resilience of SMEs is constructed and maintained, as well as the contribution of these enterprises to family livelihood and reducing widespread poverty in such settings.

Given these facts, the grand question that remains unanswered in academic and policy circles is how resilient SMEs can be developed under such conditions. This study attempts to provide an answer to this question. Owning and accessing resources have been debated as vital to the survival and growth of companies, which is in line to resource-based view (RBV) arguments. Following these arguments, several studies have been conducted to examine the relationship between a varied portfolio of the firm's resources and performance. Hitherto, the findings have been inconclusive and inconsistent, thus showing our limited understanding of the link between resources and firm resilience or about how resources enable achieving firm resilience. Thus far, no comprehensive framework has been established that relates the resources, firm resilience, and contextual factors associated with this relationship. Understanding how resources change and are converted into firm

performance could find the missing link between resources and firm resilience (Sirmon et al. 2008, Sirmon et al. 2007, Sirmon et al. 2011).

Research on how resources are managed and orchestrated to strengthen firm resilience is a critical subject for a firm operating in turbulent, resource-scarce business environments as their survival is significantly threatened. The sequence of resource orchestration processes (Hitt et al. 2011) driven by a firm's entrepreneurial orientation (EO) offers a strategic direction to stimulate firm resilience and these firms' contribution to family livelihood. More importantly, most of the extant studies were conducted in developed countries. Thus, an understanding of the relationship between resources and firm resilience in developing countries is still lacking (Abebrese 2015). Drawing on resource orchestration theory (ROT) and EO, conducting additional empirical research is needed in developing countries to broaden our knowledge of how firms' resilience can be strengthened. In this thesis, we sought to shed light on this issue by providing evidence from Ethiopia. This thesis is designed to explore how the sequence of resource orchestration processes driven by EO enables constructing and maintaining firm resilience in a turbulent, resource-scarce business environments.

The objective of the research is as follows:

Gain insight into how entrepreneurs in DCs can mitigate poverty by building business resilience through EO as a driver of resource acquisition and use and transform business resilience into a family livelihood by strategically positioning their business.

This thesis is comprised of three parts. The first part (Chapters 1–3) establishes the background for the thesis by structuring the fragmented literature on SME resilience, followed by developing and testing a measurement scale for resilience. The second part (Chapters 4-5) focuses on exploring what factors influence the building and maintenance of business resilience. The thesis shows that resource orchestration processes driven by EO are vital to achieving and maintaining SME resilience in a challenging business environment like Ethiopia. We also draw attention to the relationship between EO-driven resource orchestration and firm resilience's dependence on the gender of entrepreneurs, the types of social networks utilized, and the level of disruption in the

business environment. The third part (Chapter 6) examines the linkage of a firm's resilience to family livelihood and explores the supportive survival strategies strengthening this linkage.

Summary of the studies

Chapter 1 sets the scene for this thesis. It introduces the rationale for the research, key concepts, and theoretical foundation, describes the research questions, the context of the study, and the methodology used and provides an outline of the thesis.

Chapter 2 presents the basis for this thesis using a systematic literature review. The findings are based on a review of 118 articles, which provide an overview of the resilience literature in the SME field, and proposed the dimensions defining SMEs resilience, comprising performance growth, adaptation (i.e., adaptability to challenges), and the ability to seize business opportunities. The nature of disruptions threatening the survival and growth of SMEs can be discrete or continuous and diverse. The latter type of environment is referred to, in this thesis, as a persistently disruptive, turbulent, and resource-scarce business environment, which is typical in DCs.

Chapter 3 validates the SME resilience dimensions identified in Chapter 2 using survey data collected from 408 Ethiopian non-farm entrepreneurs. The results confirmed the three dimensions proposed in Chapter 2 to define the resilience of SMEs as robust measures in this context. The invariance of these dimensions was also tested, and the findings prove the equivalence of the identified dimensions across gender groups of entrepreneurs. So the same resilience dimensions hold across male and female entrepreneurs.

Chapters 4 and 5 empirically test the sequential processes of ROT driven by EO. Specifically, Chapter 4 analyzes the influence of EO on resource structuring, especially in the acquisition phase. In turbulent, resource-scarce business environments, like Ethiopia SMEs face significant resource acquisition and usage challenges. In such settings, EO drives resource acquisition (Huang and Wang 2013). However, empirical research on this point is not addressed in the literature. This study proves that EO is positively related to firms' resource acquisition. We also identify the moderating effect of social ties on resource acquisition and the direct negative effect of a hostile business environment on EO.

Chapter 5 extends the ROT processes. Resource acquisition is vital but not a sufficient condition to build a resilient business. The acquired resources have to be changed and orchestrated by the entrepreneur to produce value. EO is considered a key driver in the use of resources. In this research, EO is identified as a mediator between resources and firm resilience by impacting the orchestration of resources. The results presented in Chapter 5 confirm the mediating role of EO, supporting an argument about the entrepreneur's intervention in the use of resources to achieve firm resilience. We also found gender differences in orchestrating resources. Female entrepreneurs are found to be in a better position to boost their EO by using human capital and social ties as resources than their male counterparts, which is contrary to existing expectations. Female entrepreneurs are also found to leverage resources into firm value to a greater extent than their male counterparts.

Chapter 6, confirms the positive relationship between firm resilience and family livelihood and identifies the importance of survival strategies, such as selecting the business location and funding sources, in strengthening the relationship between business resilience and family livelihood.

Chapter 7 presents the key findings of the research, as well as the main conclusions and a discussion of the research's contributions, implications, and limitations and future research directions.

Concluding Remarks

In conclusion, this thesis answers the call to better understand how resilient SMEs can be created and aims to offer insight into the role of SMEs in family livelihood in turbulent, resource-scarce business environments. The thesis contributes to the advancement of the resilience and strategic entrepreneurship literature. We theorized and, subsequently, proved that to understand a firm's resilience, the essential entrepreneurial dimension 'seizing opportunities' should be part of the definition of resilience. This indicates that, not only the resources themselves but also the quality of the acquisition and usage supported by EO of the owner/manager, determines the performance of a firm. In line with these findings, we concluded that female entrepreneurs are associated with more effective acquisition and use of resources than their male counterparts even though women experience greater social hindrances. In the transformation of firm resilience into a contribution to family livelihood, entrepreneurial engagement is prominently apparent in two ways. Entrepreneurs

boost their business resilience and they strategically position their firms to be able to contribute to their families' livelihood.

This research shows that governments in DCs rightfully aim to boost entrepreneurship even though the turbulent and resource scarce business environments do not seem to favor a flourishing business climate. Although the turbulent situations faced by non-farm entrepreneurs in Ethiopia are complex and persistent, investments in local infrastructure will support the resilience of these businesses. Governmental investments in industrial parks nearby cities, harbors or other transportation hubs can be beneficial following entrepreneurs own reasoning for choosing certain locations. Also stimulating private credit funds enabling better access to finance for entrepreneurs would be beneficial. Since EO has positive implications for firms' resource mobilization and usage in resource-scarce settings, this thesis suggests the need for expanding practical training for entrepreneurs. Both formal (on e.g. marketing, bookkeeping, purchasing) and informal courses (e.g. organizing sessions for entrepreneurs to learn from each other) on entrepreneurship can enrich the entrepreneurial decisions and management. Especially addressing the societal position of women, government can promote procedures tailor made for women to access finance, to organize trade fairs specifically targeting women entrepreneurs and to set up an organizational agency for women to contact and visit for their business related questions. In the context of Ethiopia, this is particularly important to small firms, which are likely to be more vulnerable to environmental impacts due to their limited resources. Policies seeking to address poverty should consider the potential contribution of non-farm enterprises to household wellbeing. Without policy strategies aimed at stimulating the entrepreneurial capabilities of small-business owners, it is more difficult for SMEs to create jobs in Ethiopia.

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Appendices

Appendix A: Table 2.1

Table 2.1: Distribution of publications by Journal published

Journal name	No. of publications	Journal name	No. of publications	Journal name	No. of publications
Cleaner Production	1	Loss Prevention in the Process Industries	1	Learning and Intellectual Capital	2
International Business Studies	1	Management & Organization	2	International Economic Research.	1
Logistics management	1	Management (France)	1	Supply Chain Management.	1
Strategic Property Management	1	Management and Enterprise Development	1	Corporate Reputation Review.	2
Annals of Tourism Research	3	Management Studies	1	Disaster Risk Reduction.	2
Asia Pacific Business Review	1	Manufacturing Technology Management	1	Production Planning and Control	2
Austrian Emergency Management	1	MIT Sloan management review	2	International Entrepreneurship.	1
Built Environment Project and Asset Management	1	Natural hazards review	2	Academy of management	1
Business Economics and Finance	1	Ocean and Coastal Management	1	Academy of Management Annals	1
Business Horizons	1	Organizational Effectiveness: People and Performance	1	Bus Strategy Development	2
Business Logistics	1	Problems and Perspectives in Management	1	Springer	2
Business Research	2	Production Economics	2	Procedia engineering	2
Business Strategy and the Environment	2	Production Research	11	Sociologia Ruralis	1
Cambridge Regions, Economy Society	1	Quality - Access to Success	1	World Review of Entrepreneurship, Management and Sustainable Development	2
Contingencies and Crisis Management	2	R and D Management	1	Organizational Analysis.	2
Decision Sciences, Risk and Management	1	Resilient Organisations Research Group	1	Information Systems and Technology Management	1
Development and Learning in Organizations	1	Review of Social Economy	1	Innovation	1
Disaster prevention and Management	1	Strategy and Management	1	Local Economy	2
Entrepreneurial Behaviour & Research	3	Supply Chain and Operations Resilience	1	Sustainability: Science, Practice, & Policy	1
Entrepreneurship & Regional Development	4	Sustainability	3	Sustainable Tourism	3
Entrepreneurship and Small Business	1	Sustainability Accounting, Management and Policy	1	Sustainability	1
Environmental Conservation	1	WIT Transactions on The Built Environment	1	Sustainable Tourism	3
Sustainability: Science, Practice, & Policy	1	Wine Business Research	1		

Appendix B: Table 2.6

Table 2.6: List of selected papers reviewed and analyzed in chapter

(Abylaev et al. 2014, Acquaah et al. 2011, Adnan et al. 2016, Akgün and Keskin 2014, Alberti et al. 2018, Aleksić et al. 2013, Ali et al. 2017, Alonso and Bressan 2015, Amann and Jaussaud 2012, Arijit Bhattacharya et al. 2016, Arsoovski et al. 2015, Ates and Bititci 2011, Avery and Bergsteiner 2011, Bentley et al. 2017, Bernard and Barbosa 2016, Biggs et al. 2015, Biggs 2011, Biggs et al. 2012a, Biggs et al. 2012b, Branicki et al. 2018, Branzei and Abdelnour 2010, BREZULEANU et al. 2015, Bullough and Renko 2013, Burnard and Bhamra 2011, Cardoso and Ramos 2016, Carvalho et al. 2016, Castellacci 2015, Chan 2011, Chiesi 2014, Christopher and Peck 2004, Clarke 2008, Conz et al. 2017, Crick and Crick 2016, Dahlberg and Guay 2015, Dahles and Susilowati 2015, Danes et al. 2009, Darkow, Demmer et al. 2011, Dillard et al. 2010, Doeksen and Symes 2015, Duarte Alonso 2015, Duchek 2014, Dumitraşcu and Dumitraşcu 2016, Erol et al. 2010, Espiner et al. 2017, Winnard et al. 2014, Williams and Shepherd 2016, Williams and Vorley 2017, Williams and Vorley 2014, Wedawatta et al. 2010, Wedawatta and Ingirige 2016, Wedawatta and Ingirige 2012, Tracey and French 2017, Torres et al. 2018, Tognazzo et al. 2016, Tibay et al. 2018, Thomas et al. 2015, Tengeh 2016, Tengblad and Oudhuis 2018, Tengblad 2018, Tajuddin et al. 2017, Sun 2011, Sullivan-Taylor and Branicki 2011, Steiner and Cleary 2014, Steiner and Atterton 2015, Sköld and Tillmar 2015, Sheffi and Rice 2005, Sauser et al. 2018, Sapeciay et al. 2017, Saoji 2012, Sanchis and Poler 2014, Sahebjamnia et al. 2018, Sabatino 2016, Richtnéř and Löfsten 2014, Régnier 2004, Rahman and Mendy 2018, Pettit et al. 2013, Pascua and Chang-Richards 2018, Pal et al. 2014, Pal et al. 2012, Ortiz-de-Mandojana and Bansal 2016, Orchiston et al. 2016, Mzid et al. 2018, Morisse and Ingram 2016, Moore and Manning 2009, Menéndez Blanco and Montes Botella 2016, Mendoza et al. 2018, McManus et al. 2007, McGuinness and Johnson 2014, Marković 2018, Manfield and Newey 2017, Lv et al. 2018, Liu 2013, Littlewood and Holt 2018, Linnenluecke et al. 2012, Linnenluecke and Griffiths 2010, Lengnick-Hall et al. 2011, Lee et al. 2013, Larsson et al. 2016, Lampel et al. 2014, Kantur and Say 2015, Kantur and Arzu 2012, Ismail et al. 2011, Irvine and Anderson 2004, Huggins and Thompson 2015, Hedner et al. 2011, Harries et al. 2018, Hamel and Valikangas 2003, Halkos et al. 2018, Gunasekaran et al. 2011, Gray and Jones 2016, Gomes 2015, Gerde et al. 2016, Fiksel 2006).

Appendix C: Table 3.2

Table 3.2 List of experts and pilot interview participants

Name	Role	Address/organizations
Beleyneh Legesse (PhD)	Researchers/Academician	Haramaya University
Jeylan Wolie (Ph.D.)	Researchers/Academician (Language editorial)	Haramaya University
Adem Kedir(PhD)	Researchers/Academician (study province)	Arsi University
Amanuel Zewgie	Researchers/Academician (study province)	Adama University
Gezehegn Abebe	Wasasa Microfinance	Arsi province
Hirut Makuria	Wasasa microfinance	Arsi province
Tesfaye Gurmu	OCSSACo microfinance	East Shewa province
Hashim Kedir	Microenterprise development office	East Shewa province
Bezu Deribe	Microenterprise trainer (vocational college in Assella)	Arsi province
Zerihun Wodaje	SME-owner	East Shewa province (Adama)
Siraj Kemal	SME-owner	Arsi province (Assella)

Appendix D: Table 3.4

Table 3.4: Exploratory Factor Analysis (Items loading value)

Items description		Loading value
Growth (performance)	(Items score 1=strongly disagree, 7=strongly agree)	
Mean =5.15 SD=1.15	P1: My firm sales increased since the founding of the company, and I expect the same for the coming 2 years.	0.89
	P2: My firm profits increased since the founding of the company and I expect the same for the coming 2 years.	0.88
	P3: My firm market share increased since the founding of the company and I expect the same for the coming 2 years.	0.86
	P4: Overall I expect my firm will grow fast despite facing challenges and disruptions	0.69
Adaptability	(Items score 1=strongly disagree, 7=strongly agree)	
Mean =5.21 SD=1.25	AD1: My firm's ability to handle potential threats from the environment has been greater than that of our major competitors.	0.79
	AD2: My firm's capability to succeed in an intensely disruptive business environment has been greater than that of our competitors.	0.78
	AD3: My firm's capability to handle potential threats from the business environment has been greater than that of our competitors.	0.72
	AD4: My firm's capability to adapt quickly to uncertainty in business environments (law, policies, and competitions) has been greater than that of our competitors.	0.78
Seizing business opportunities	(Items score 1=strongly disagree, 7 =strongly agree)	
Mean=5.32 SD=1.29	Opp1: My firm regularly monitors any changes and potential business opportunities in our industry of operation.	0.82
	Opp2: In the coming six months, my firm will create new business ventures.	0.84
	Opp3: While running routine day-to-day activities, my firm recognizes various potential business venture ideas for expansion.	0.77
	Opp4: My firm will close in the near future, as a new venture opportunity has not yet recognized. (Reverse score).	Deleted -0.18

Appendix E: Table 4.1

Table 4.1: Items used to operationalize the constructs in the model

Constructs	Item	Scale
Resource acquisition	Your firm gets easy access to needed resources from suppliers using credit financing	1= strongly disagree, 7=strongly agree
	Total physical assets mobilized by your firm (transformed to a logarithm)	Continuous
	How large is your current operating finance (transformed to a logarithm)	Continuous
Entrepreneurial orientation (EO)	EO_R1: I have a strong inclination for high-risk business (with chances of very high returns).	1=strongly disagree, 7=strongly agree
	EO_R2: Owing to the nature of the environment, bold ranging acts are viewed as a useful and common practice.	1=strongly disagree, 7=strongly agree
	EO_R3: When confronted with decisions involving uncertainty, I typically adopt a bold posture in order to maximize the probability of exploiting opportunities.	1=strongly disagree, 7=strongly agree
	EO_P1: I undertake the actions to which other entrepreneurs must react	1=strongly disagree, 7=strongly agree

	EO_P2: My entrepreneurial activities are characterized by growth, innovativeness and are development oriented.	1=strongly disagree, 7=strongly agree
	EO_P3: My relationship with competitors is characterized by the fact that I pursue a tough “undo- the-competitors” philosophy.	1=strongly disagree, 7=strongly agree
	EO_I1: I search actively for innovative product/services and new production processes.	1=strongly disagree, 7=strongly agree
	EO_I2: In the last 2 years, I have invested in resources such as machinery or tools to improve my (business) premises.	1=strongly disagree, 7=strongly agree
	EO_I3: During the past 2 years, I have marketed a very large number of new/improved products/services.	1=strongly disagree, 7=strongly agree
	EO_I4: I plan to change my firm product/service-mix within the next year.	1=strongly disagree, 7=strongly agree
Social capital (social ties)	My firm has strong ties with rotary credit and saving associations (ROSAs). This kind of association is named <i>iquib</i> in Ethiopia.	1=strongly disagree, 7=strongly agree
	My firm has strong ties with local cooperatives, business associations, and development associations	1=strongly disagree, 7=strongly agree
Social capital (business ties)	My firm has strong ties with suppliers	1=strongly disagree, 7=strongly agree
	My firm has strong ties with customers	1=strongly disagree, 7=strongly agree
	My firm has strong ties with other firms, such as competitors	1=strongly disagree, 7=strongly agree
Business environment hostility	Business support (institutional voids problems)	1=very low, 7=very high
	Infrastructural hurdles (roads, electricity, water, and transportation, etc) related to your business	1=very low, 7=very high
	Market access hurdles related to your business	1= very low, 7=very high
Control variables	Firm age was measured by the number of years since the firm was started and transformed into a logarithm. The variable is firm age (log)	Continuous
	Firm size was measured by the average (mean) of the number of employees of the firm between 2013-2017. The variable is the firm size (log)	Continuous

Appendix F: Table 5.1

Table 5.1 Operationalization of the constructs

Constructs	Item	Scale
Business Resilience	See Table 3.4, Appendix D	-
EO	See Table 4.1, Appendix E	-
Social capital (social ties)	See Table 4.1, Appendix E	-
Social capital (business ties)	See Table 4.1, Appendix E	-
Human capital	Level of education achieved (Edu-level)?	1=illiterate , 7= Bachelor degree & above
	Have you ever worked for someone (employment experience)	Binary(Yes=1/No=0)
	Have you ever employed as a manager/supervisor (managerial experience)	Binary (Yes=1/No=0)
Physical capital	Total physical assets of the firm (transformed to logarithm)	Continuous
Gender	The firm owner reported gender. 1=male; 0=female	Binary
Business environment hostility	See Table 4.1, Appendix E	-
Control variables	Firm age was measured by the number of years since the firm was started and transformed into a logarithm. The variable is firm age (log)	Continuous
	Firm size was measured by the average (mean) of the number of employees of the firm between 2013-2017. The variable is firm size (log)	Continuous

Appendix G: Table 6.1

Table 6.1: operationalization of the constructs

Constructs	Item	Scale
Family livelihood	Rate the overall household livelihood conditions	1= very low, 7= very good
	Rate the food security status of your household	1= very low, 7= very good
Business resilience	See Table 3.4, Appendix D	-
Location	Location of business (1: near to the center, and otherwise 0 for remote)	binary
Business sector types	We classified sectors into two categories: industry and service sectors. We coded 1: industry; and 0 for service-oriented sector type. The industry includes agribusiness, manufacturing, and construction. The service includes trade and business services e.g., transportation and restaurants	binary
Finance sourcing company	1= is given for those financed by Wasasa, and 0 for those getting credit service from OCCSSCo. While OCCSCO is government affiliated MFI, the Wasasa is private MFI.	binary
Gender	The firm owner reported gender 1=male and 0=female	binary
Income generated from other sources	Total income generated from other sources (farming, remittances wage, and house renting activities). Then transformed to logarithms for normalization	Continuous
Investment amount	The value of the total amount of firm investments reported by the firm owner. The value then transformed to logarithms for normalization	Continuous
Marital status	Are you married? 1= yes married , 0= No	binary
Educational status	1: literate ; 0=illiterate	binary

Appendix H Other performance indicators by SMEs sector types (mean scores and standard deviation)

Table i: Descriptive statistics

SMEs sector/business types	Number of SMEs per sector	Average profit before tax (2013-2017)	Return on Investment (ROI)	Average sales (2013-2017)
Consumer-related activities (e.g., restaurants)	58	60.6 (59.6)	27.7 (6.4)	1064 (303.2)
Agribusiness-oriented (e.g., dairy and poultry)	80	42.2 (49.1)	1.5 (1.8)	154.1 (208.9)
Manufacturing activities (e.g., metal work)	60	59.7 (73.7)	1.2 (1.4)	235.2 (301.9)
Construction sector	22	541.9 (1146.7)	1.8 (2.6)	6036.6 (12727.1)
Trade of various commodities	147	63.4 (92.4)	3.3 (3.8)	787.8 (659.2)
Business services (e.g., transportation)	24	54.6 (47.6)	1.7 (1.9)	260.7 (299.4)
Others	17	63.4 (25.1)	2.1 (2.3)	316.0 (380.7)

Note: Currency used is Ethiopian birr. Exchange rate in the 2016 year: Average 1 US dollar= 22 Ethiopian birrs. The average profit and sales amounts are reported (x1000). In bracket_ SD.

Engoneity problem test

Table ii: Test results

. estat endog

Tests of endogeneity

Ho: variables are exogenous

Durbin (score) chi2(1) = 2.70416 (p = 0.1001)

Wu-Hausman F(1,279) = 2.61697 (p = 0.1069)

. estat firststage (Test showing weather chosen IV is strong or weak)

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	F(1,280)	Prob > F
BusinessRe~t	0.4959	0.4779	0.3559	154.731	0.0000

Minimum eigenvalue statistic = 154.731

Critical Values # of endogenous regressors: 1

Ho: Instruments are weak # of excluded instruments: 1

	5%	10%	20%	30%
2SLS relative bias	(not available)			

	10%	15%	20%	25%
2SLS Size of nominal 5% Wald test	16.38	8.96	6.66	5.53
LIML Size of nominal 5% Wald test	16.38	8.96	6.66	5.53

iii. Survey Questionnaire

Introduction

I would like to ask you to participate in a survey on non-farm entrepreneurship. This survey is supported by the Wageningen University, the Netherlands (Europe). We are interested in why some firms are resilient and others are not. The outcome of the research will contribute to the knowledge of how companies become and stay resilient, and thus will support the government to develop their policies.

The questionnaire covers relevant aspects of your characteristics as an entrepreneur, your company nature and the environment in which you and your company function, the performance of your company and your livelihood.

We assure you that all the information you give us will be kept absolutely confidential and will be utilized for the purpose of this research.

If you are interested in the results of this project, we will be glad to send you a summary of our findings after the completion of the study. You are kindly requested to provide your genuine response to the questions that follow.

Thank you in advance for your cooperation!

Dear Interviewer,

Follow the following instructions during each interview session

- Make sure that you have the necessary materials with you such as a pencil and the questionnaire
- Approach the interviewee politely by giving greetings.
- Tell the respondent why you are there and please tell them the purpose of the survey.
“We are interested in why some firms are resilient and others are not”
- Ask the willingness of the respondent to be interviewed.
- Start your discussion bit by bit. In case the interview sessions conducted around a firm premise, pause asking questions and let the respondent serve the customer first and then continue the interview. In case the respondent serves customers, try to repeat the question by restating from where you have stopped.
- Ask the respondent to illustrate the answer with important events and issues to the questions raised.
- Give to the respondent enough time to think over the issues.

Date _____
Data entry ID nr: _____
Interviewer name _____

Part A: Socio-demographic characteristics	
1. Province	1 Eastshewa () 0 Arsi ()
2. Finance sourcing company	1 Wasasa () 0 OCSSCo ()
3. Gender	1 Male () 0 Female ()
4. Age of the entrepreneur	_____years
5. Marital status	1= Married () 2= Unmarried () 3= Divorced () 4= Separated (living apart) ()
6. How many people live in your house?	
7. Educational status?	1 Illiterate () 2 Grade 1-6 () 3 Grade 7-8 () 4 Grade 9-10 () 5 Grade 11-12 () 6 Diploma () 7 First degree and above ()
8. Have you ever worked for someone (employment experience)	1 Yes () 0 No () If yes, for how many years? _____ Job type _____
9. Have you ever employed as a manager/supervisor (managerial experience)	1 Yes () 0 No () If yes, for how many years? _____

<u>Part B: Firm characteristics</u>	
10. Business location	1 near to the center (), 0 for remote ()
11. What kind of business are you involved in (current business?) (Please tick)	1 () Consumer-Oriented services [retail, restaurants, bars, lodging and social recreation services] 2 () Agriculture [agriculture, forestry, fishing and hunting] 3 () Manufacturing [Bakery, Juice making, Packed foods, furniture, art crafts, etc] 4 () Construction [building houses, roads, wells, etc] 5 () Trade [wholesale, retail shops, market vending, etc] 6 () Business services [motor vehicle garages 7 () Other business, specify, please _____ _____
12. Firm age? _____ years.	
13. How many people in addition to yourself, are employed on average in your current business by the year?	
2013 _____ 2014 _____ 2015 _____ 2016 _____ 2017 _____	

Part C Entrepreneurial orientation (EO)

14. With regard to your firm EO level, please indicate your perceived possession using the following scale:

Strongly disagree ← Neutral → Strongly agree

1 2 3 4 5 6 7

	1	2	3	4	5	6	7
EO_R1: I have a strong inclination for high-risk business (with chances of very high returns).							
EO_R2: Owing to the nature of the environment, bold ranging acts are viewed as a useful and common practice.							
EO_R3: When confronted with decisions involving uncertainty, I typically adopt a bold posture in order to maximize the probability of exploiting opportunities.							
EO_P1: I undertake the actions to which other entrepreneurs must react							
EO_P2: My entrepreneurial activities are characterized by growth, innovativeness and are development oriented.							
EO_P3: My relationship with competitors is characterized by the fact that I pursue a tough “undo– the-competitors” philosophy.							
EO_I1: I search actively for innovative product/services and new production processes.							
EO_I2: In the last 2 years, I have invested in resources such as machinery or tools to improve my (business) premises.							
EO_I3: During the past 2 years, I have marketed a very large number of new/improved products/services.							
EO_I4: I plan to change my firm product/service-mix within the next year.							

Note: R=risk taking, P=proactiveness; and I=innovation

Part D Social capital

15(i) (Social Ties.)

Please would you tell me the extent of ties with social groups (7=very strong, 1=very poor)	1	2	3	4	5	6	7
--	---	---	---	---	---	---	---

My firm has strong ties with rotary credit and saving associations (ROSAs). This kind of association is named <i>iquib</i> in Ethiopia.							
My firm has strong ties with local cooperatives, business associations, and development associations							

16 (ii) Social capital (Business Ties)

Rate the extent of your business ties with (7=very strong, 1=very poor)	1	2	3	4	5	6	7
My firm has strong ties with suppliers							
My firm has strong ties with customers							
My firm has strong ties with other firms, such as competitors							

Part E Investment amount and resource acquisition activities

17. How large is your current operating financial capital in Birr?

18. Major physical assets (investment) of the firm?

Type (s)	Estimated value in Birr (Ethiopia)
a.	
b.	
c.	
d.	
e.	
f.	
g.	
h.	
i.	
The total investment of the firm	

19. Total physical assets mobilized by your firm _____

20. Your firm gets easy access to needed resources from suppliers using credit financing (1=strongly disagree, 7=strongly agree)

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Part F 21 Business environment hostility

The following questions are related to constraints or challenges experienced by your firm over the past year(s).

Use the scale (1=very low, 7=very high)

The extent of constraint or problem on	1	2	3	4	5	6	7
Business support (institutional voids problems)							
Infrastructural hurdles (roads, electricity, water, and transportation, etc) related to your business							
Market access hurdles related to your business							

Part G : Business Resilience

22. Firm sales, profit, and market share growth (scale 1=strongly disagree, 7=strongly agree)

i. My firm sales increased since the founding of the company, and I expect the same for the coming 2 years.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

ii. My firm profits increased since the founding of the company and I expect the same for the coming 2 years.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

iii. My firm market share increased since the founding of the company and I expect the same for the coming 2 years.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

iv. Overall I expect my firm will grow fast despite facing challenges and disruptions.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

23. Adaptation to challenges								
Strongly disagree	←			Neutral	→			Strongly agree
	1	2	3	4	5	6	7	
Perceived ability to adopt	1	2	3	4	5	6	7	
AD1: My firm's ability to handle potential threats from the environment has been greater than that of our major competitors.								
AD2: My firm's capability to succeed in an intensely turbulent business environment has been greater than that of our competitors.								
AD3: My firm's capability to handle potential threats from the environment has been greater than that of our competitors.								
AD4: My firm's capability to adapt quickly to uncertainty in business environments (law, policies, and competitions) has been greater than that of our competitors.								

24. Ability to seizing business opportunities within challenges								
Strongly disagree	←			Neutral	→			Strongly agree
	1	2	3	4	5	6	7	
	1	2	3	4	5	6	7	
Opp1: My firm regularly monitors any changes and potential business opportunities in our industry of operation.								
Opp2: In the coming six months, my firm will create new business ventures.								
Opp3: While running routine day-to-day activities, my firm recognizes various potential business venture ideas for expansion.								
Opp4: My firm will close in the near future, as a new venture opportunity has not yet recognized. (Reverse score).								

Part H	2013	2014	2015	2016	2017
25. Objective performance indicators: Please, indicate how much sales and profits growth (in volume and percentages, %) terms?					
a. Sales in Birr (average monthly sales *12 months)					
b. costs in Birr (average monthly operating costs *12 months)					
c. Profit/income in Birr					

Part I: <u>Family livelihood conditions</u>														
<p>26. During the last 12 months, did you or any members of your household receive any income from other sources? 1 yes () 0 No ()</p>														
<p>27. If your answer is yes to Q (26) above, how much did you receive in total during 12 months (estimate cash)? Sources and amount generated:</p> <p>(1) Remittances _____</p> <p>(2) Income from farming _____</p> <p>(3) Other employment/wage _____</p> <p>(4) House renting activities _____</p> <p>Total income generated from other sources _____</p>														
<p>28. Rate the food security status of your household (1= very low, 7= very good)</p> <table border="1" style="float: right;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td> </tr> </table>								1	2	3	4	5	6	7
1	2	3	4	5	6	7								
<p>29. Rate the overall your household livelihood conditions (1= very low, 7= very good)</p> <table border="1" style="float: right;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td> </tr> </table>								1	2	3	4	5	6	7
1	2	3	4	5	6	7								

About the author

Muhammedamin (Amin) Hussen Saad was born in Oromia, Ethiopia. He was awarded a Bachelor's Degree in Business Management and a Master's Degree in Public Administration from Addis Ababa University. From 2013 to 2014, he attended PhD study in Agricultural Economics at the University of Haramaya, in Ethiopia. In 2014, he was a visiting research scholar at KU Leuven University, Belgium, which created a turning point and an introduction to management studies with Professors Onno and Geoffrey of Wageningen University. Muhammedamin also has practical experience, having served as Assistant Professor and Chairman of the Department of Public Administration at Haramaya University. On April 1, 2015, he enrolled as a PhD candidate in Management Studies (now Business Management and Organization Group), in Wageningen University, with the financial support of the Nuffic program.

Muhammedamin research interests include business management, agricultural economics, and entrepreneurship development. His study centred on strategic management and resilience entrepreneurship development with a focus on developing countries. He hopes, to take up more practical tasks in the future (e.g., targeting policy development by acting as a consultant and political analyst on complex, interrelated areas like entrepreneurship, business models, governance and business administration). He can be reached at aminoojuuu@gmail.com.

Muhammedamin Hussien Saad
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan



Wageningen School
of Social Sciences

Name of the learning activity	Department/Institute	Year	ECTS*
A) Project related competences			
From Topic to Thesis Proposal, YRM 61303	WUR	2015	3.0
Advanced Econometrics , AEP 60306	WUR	2017	6.0
Research Proposal Writing	WASS	2015/16	6.0
Microfinance and Marketing in developing countries, DEC 51806	WUR	2017	6.0
B) General research related competences			
Introduction course	WASS	2015	1
Presented paper titled “The resilience of Measuring resilience: robustness of SMEs business resilience measurement”.	WASS PhD Day, Wageningen University	2018	1
Presented paper titled “Resource bundling and leveraging: the role of entrepreneurial orientation and gender on business resilience in resource-scarce and demanding environment”.	Academic conference high tech small firms\ University of Twente	2019	1
WUR Resilience Symposium	WUR\Veerkraft (Klarenbeek), the Netherlands	2018	1
Conceptualization of SMEs Business Resilience: A Systematic Literature Review	BMO seminar/WUR	2017	0.5
C) Career related competences/personal development			
Techniques for Writing and Presenting Scientific Paper	WGS	2015	1.2
Summer School Experiments in developing countries: methods and applications	Groningen University	2015	2.0
Academic publication and presentation in the social sciences	WASS	2017	4.0
The essential of scientific writing and presenting	WGS		1.2
Information literacy including Endnote introduction	WUR	2017	0.6
Reviewing a scientific paper	WGS	2017	0.1
WASS PhD council member	WASS	2018/19	2.0
Stayed as visiting research Scholar	Center of entrepreneurship and family business research, KU Leuven, Belgium	2014	3.0
Total			39.6

*One credit according to ECTS is on average equivalent to 28 hours of study load

Colophon

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