Innovative entrepreneurial processes in the low-income context

Marleen Wierenga

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Poverty is a persistent global challenge present at different degrees in every society. It is most urgent in African and Asian countries where people struggle to have basic needs satisfied, and the lacking basic infrastructure influences lives of people regardless of their income level. This dissertation focuses on solutions to poverty in low-income communities of emerging economies. More specifically, the dissertation explores entrepreneurial activities of the poor people in India, and foreign firms developing innovations to increase the well-being of the poor in emerging economies.

While any entrepreneur deals with scarcity of resources, low-income entrepreneurs operate also within narrower institutional boundaries. These come from financial constraints, limited social capital, lacking skills and narrower cultural norms. Further, the poor entrepreneurs tend to do repetitive routine work, imitate others and be driven by necessity. However, this dissertation explores grassroots entrepreneurs as innovative actors from a low-income background and developing, commercializing and scaling an innovation despite the limitations. Further, the dissertation explores foreign firms developing solutions to the conditions of poverty, yet with little tangible experience of the everyday struggles of the people. Exploring how different actors contribute to alleviating poverty, this dissertation allows us to learn more about entrepreneurship in the context of poverty and resource-scarcity.

Each of the three essays of the dissertation focuses on different aspects. The first essay looks at grassroots entrepreneurs and the scaling process of these innovative low-income entrepreneurs. The second essay explores the work done by organizations in supporting grassroots innovators and entrepreneurs in their endeavours. The third essay studies firms based in developed countries but innovating products and services for users based in emerging economies. Here, the interest lies in understanding innovation processes across social and geographical boundaries.

The dissertation shows the roles of innovative low-income entrepreneurs in developing solutions which are relevant to the problems of people living in conditions of poverty. These entrepreneurs are also important in providing employment to community members. The study also shows the importance of well-targeted support in practical questions to realize the entrepreneurial potential of grassroots entrepreneurs. An innovative business idea, access to relevant support and an enabling institutional environment are the conditions under which entrepreneurship can be a solution to poverty. Institutional level issues, such as education and health care, contribute to the conditions of poverty but also to the opportunities available for low-income entrepreneurs. Hence, this should not be forgotten in entrepreneurial research. When innovative solutions come from abroad, it helps if foreign actors have local representation and engagements.

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Tekijä

Marleen Wierenga

Väitöskirjan nimi

Innovatiiviset yrittäjyysprosessit vähävaraisissa olosuhteissa

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Köyhyys on maailmanlaajuinen ongelma joka on eriasteisena läsnä kaikissa yhteiskunnissa. Se on kuitenkin vakavinta Afrikan ja Aasian maissa, joissa ihmisillä on vaikeuksia tyydyttää perustarpeitaan ja puutteellinen perusinfrastruktuuri vaikuttaa ihmisten elämään tuloista riippumatta. Tämä väitöskirja keskittyy kehittyvien talouksien köyhyyteen ja siihen luotuihin ratkaisuihin. Tarkemmin, väitöskirja tutkii ulkomaisten yritysten yrittäjyys- ja innovaatioprosesseja luodessaan ratkaisuja kehittyvien maiden köyhille, mutta myös yrittäjyyttä köyhien keskuudessa Intiassa.

Vaikka jokainen yrittäjä kamppailee resurssipulan kanssa, köyhät yrittäjät toimivat sen lisäksi vielä kapeiden institutionaalisten rajojen sisällä. Nämä rajat johtuvat taloudellisista rajoituksista, suppeasta sosiaalisesta pääomasta, puutteellisista taidoista ja kapeista kulttuurisista normeista. Lisäksi, köyhät yrittäjät tekevät rutiininomaista työtä, matkivat muita ja ryhtyvät yrittäjiksi olosuhteiden pakosta. Kuitenkin tämä väitöskirja käsittelee ruohojuuritason yrittäjiä innovatiivisina toimijoina jotka kehittävät, kaupallistavat ja skaalaavat innovaatioita. Lisäksi väitöskirja käsittelee ulkomaisia yrityksiä, joille markkina ja loppukäyttäjän haasteet voivat olla vieraita, mutta jotka kuitenkin kehittävät ratkaisuja köyhyysolosuhteisiin. Miten erilaiset toimijat vaikuttavat köyhyyden vähenemiseen on tärkeää ymmärtää, ja tämä väitöskirja lisää meidän ymmärrystä köyhyydestä ja yrittäjyydestä.

Väitöskirjan kolme esseetä käsittelevät köyhyyttä ja yrittäjyyttä eri näkökohdista. Ensimmäinen essee keskittyy ruohojuuritason yrittäjiin ja näiden innovatiivisten yrittäjien skaalautumisprosessiin. Toinen essee tutkii organisaatioita, jotka tukevat ruohojuuritason innovoijia ja yrittäjiä heidän ponnistuksissaan. Kolmas essee tarkastelee yrityksiä jotka toimivat kehittyneistä maista käsin mutta luovat ratkaisuja käyttäjille jotka sijaitsevat kehittyvien talouksien maissa. Tässä on kiinnostavaa ymmärtää sosiaalisten ja maantieteellisten rajojen yli meneviä innovaatioprosesseja.

Väitöskirja näyttää innovatiivisten köyhien yrittäjien roolin kun luodaan ratkaisuja jotka ovat merkityksellisiä köyhyysolosuhteissa eläville ihmisille. Nämä yrittäjät ovat myös tärkeitä luomaan työpaikkoja yhteisöjensä jäsenille. Tutkimus näyttää myös käytännön haasteisiin liittyvän kohdennetun tuen tärkeyden, jotta ruohojuuritason yrittäjät voivat realisoida yrittäjyyspotentiaalin. Olosuhteet, joissa yrittäjyys voi olla toimiva ratkaisu köyhyyteen, ovat innovatiivinen liikeidea, pääsy relevantin tuen äärelle sekä yrittäjyyttä tukeva institutionaalinen ympäristö. Instituutiotason kysymykset kuten koulutus ja terveydenhuolto, vaikuttavat köyhyyden olosuhteisiin, mutta myös köyhien yrittäjien käsillä oleviin mahdollisuuksiin. Näin ollen, tätä ei pitäisi unohtaa yrittäjyyden tutkimuksessa. Kun innovatiiviset ratkaisut tulevat ulkomailta, ulkomaista toimijaa auttaa kun on paikallisia sitoumuksia ja läsnäoloa.

Avainsanat köyhyyden vähentäminen, yrittäjyys, innovaatio, Intia, kehittyvät markkinat

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Acknowledgements

It was summer 2015, I had handed in my Master Thesis and before starting my summer job in a consultancy firm, I travelled to New York with a group of friends. We did a tour at the headquarters of the United Nations, and before leaving the General Assembly I wanted to check my email one last time. New York did not have many possibilities for free Wi-Fi so I wanted to take advantage of the opportunity. I had received an email from my Master Thesis supervisor with the grade for my thesis. My friends congratulated me on my grade, Iida quickly remarked “Oh, now you are going to do a PhD” and we continued exploring New York. For some reason, I couldn’t let go of that idea of doing a PhD. Now, five years later, that simple remark has materialized into this dissertation.

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Helsinki, May 2020
Marleen Wierenga

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List of Essays

This doctoral dissertation consists of a summary and the following publications, which are referred to in the text by their numerals:

1. Wierenga, M. (2020). Uncovering the Scaling of Innovations Developed by Grassroots Entrepreneurs in Low-income Settings. *Entrepreneurship and Regional Development*, 32(1–2), 63–90. DOI: [10.1080/08985626.2019.1640478](https://doi.org/10.1080/08985626.2019.1640478)
2. Wierenga, M. (*Unpublished*). Support organizations as actors in the poverty alleviation sphere. An earlier version of this paper was presented at the 35th EGOS Colloquium, July 4-6, 2019, Edinburgh, United Kingdom.
3. Wierenga, M., Lindeman, S., Levänen, J. & Hossain, M. (*Unpublished*). Entrepreneurial Innovation Processes: Refining the network dimension of Effectuation Theory. An earlier version of this paper was presented at the 78th Academy of Management Annual Meeting, August 10-14, 2018, Chicago, Illinois, USA.

1.Introduction

“As people who live – in a broad sense – together, we cannot escape the thought that the terrible occurrences that we see around us are quintessentially our problems. They are our responsibility, whether or not they are also someone else’s” (Sen, 1999, p. 282).

The daily news is filled with alarming information on issues such as climate change, deforestation, biodiversity loss and, recently, the global covid-19 pandemic. It is also well-known that the rapid population growth and global inequality drive this environmental destruction (Ripple et al., 2017). On a country level, money is illegally moved out of developing and emerging economies—for example, in the form of tax evasion—which hampers countries’ sustainable economic growth (R. W. Baker, 2005). The latest figures show that around 2000 of the world’s richest people together have more wealth than the 4,6 billion poorest people (Oxfam, 2020). Further, the majority of adults, around 2,9 million globally, have less than 10 000 USD worth of wealth (Shorrocks, Davies, & Lluberas, 2020). The wealth pyramid (Figure 1) visualizes this inequality.

Figure 1 Global wealth distribution in 2019 represented with a pyramid, based on Shorrocks and colleagues (2020)

Grand challenges are complex, societal problems which materialize in the daily lives of many globally (George, Howard-Grenville, Joshi, & Tihanyi, 2016). This dissertation explores issues related to the complex grand challenge of global poverty and income inequality. The international poverty line is used

by international organizations, such as the United Nations, to measure poverty. It defines extreme poverty as having less than 1.90 USD (in 2011 Purchasing Power Parity (PPP) dollars) available a day (Worldbank, 2018). Poverty is not only classified by low and fluctuating income but also by a lack of access to basic services. Poverty also leads to unequal opportunities needed to live a life of value and purpose (Sen, 1999). Poverty has been tackled by international actors, including governments, intergovernmental organizations, local NGOs and companies, through different approaches, such as development aid, corporate-led initiatives and policy efforts. For example, the Sustainable Development Goals are a global policy effort to address challenges such as poverty, hunger, gender inequality and biodiversity loss.

Most of those reading this dissertation likely do not have an extremely poor background; hence, they might find it difficult to know or even understand what the life of a poor person looks and feels like. In an attempt to describe it, poor people living in emerging economies have a limited budget for necessary expenses such as food, shelter, education and health care, an irregular income and large or extended families (Banerjee & Duflo, 2007). Secondly, these people have fewer opportunities in life and, consequently, less freedom to decide their lives' directions (Sen, 1999). For example, a lacking access to quality education with qualified teachers after primary school makes it unlikely for a child with a low-income background to have the desire or necessary skills to attend university. Rural poor individuals can grow vegetables and fruits and herd cattle. Despite being self-sufficient, they live far away from quality services. A village might have a primary school and a clinic but no secondary education or hospital. Being poor in an urban setting means having more employment opportunities but also higher living expenses, increased risk of exploitation and crime victimisation.

Although poverty is present in every society, its most extreme manifestations are in African and Asian countries, such as Bangladesh, Pakistan and Vietnam. The geographical context of this dissertation research is India. While it is classified by the World Bank as a Middle Income Country, it is among the countries with a high income inequality and hence has pockets of extreme poverty. According to statistics of the Asian Development Bank, India has a population of 1,332 billion inhabitants, of which 21.2% live in extreme poverty, defined as having 1.90 USD PPP a day at one's disposal (Asian Development Bank, 2018). While unemployment is low in India, the proportion of the population that is employed with a wage below 1.90 USD PPP a day is 13.4%. Another study shows that while the Indian economy has grown and poverty declined over the past three decades, inequality has increased in terms of consumption level, income and wealth distribution (Himanshu, 2019). Furthermore, factors such as caste, community, religion, region and gender contribute to the participation in the labour market in India and therefore to the level of poverty.

1.1 Research setting

Several actors are working in the sphere of poverty alleviation. For example, governments of developed countries provide lesser developed governments with foreign aid. This allows countries to fund infrastructure development projects, but it also creates a sense of aid dependence (Moyo, 2009). Over the course of decades this has not eradicated poverty (Alvarez, Barney, & Newman, 2015). Another proposed strategy for tackling poverty alleviation is the Bottom of the Pyramid approach. Following that approach, large multinational firms are encouraged to consider the poor as a potentially profitable market segment (Prahalad, 2010). The Bottom of the Pyramid (BOP) market refers to the poorest four billion people living at the bottom of the economic pyramid with less than 9 USD (PPP) a day, who are underserved but potentially an interesting market for companies (Hammond, Kramer, Katz, Tran, & Walker, 2007; Prahalad, 2010). After the initial excitement, innovating for BOP turned out to be too costly, risky, time-consuming and complex (Halme, Lindeman, & Linna, 2012).

This dissertation focuses on low-income entrepreneurs and entrepreneurship as a solution to poverty (Bruton, Ketchen, & Ireland, 2013). The existing literature understands low-income entrepreneurs as being faced with lacking human capital, property rights and financial capital (Alvarez & Barney, 2014), informal environment operation (Webb, Tihanyi, Ireland, & Sirmon, 2009), and often self-employment with little potential for growth (Alvarez & Barney, 2014). Low-income entrepreneurs work as sales representatives of international companies (Scott, Dolan, Johnstone-Louis, Sugden, & Wu, 2012), coffee farmers (Tobias, Mair, & Barbosa-Leiker, 2013), livestock holders (Alvarez & Barney, 2014) and micro-entrepreneurs selling miscellaneous goods (Bradley, McMullen, Artz, & Simiyu, 2012; Webb, Morris, & Pillay, 2013). In other words, extant literature frames low-income entrepreneurs predominantly as self-employed agents doing repetitive routine forms of entrepreneuring and often copying or mimicking the activities of others.

Low-income entrepreneurs operate in an environment with scarce resources for funding, networks and institutional support. Microfinance institutions provide low-income entrepreneurs with access to financing (Khavul, 2010). However, a lack of access to financial capital is not the only perpetuator of poverty among low-income entrepreneurs (Bradley et al., 2012). For example, the institutionally complex environment (Mair, Martí, & Ventresca, 2012) and institutional voids in the institutional environment (Mair & Martí, 2009) also contribute to poverty conditions. Further, NGOs can act as social intermediaries between the poor entrepreneurs and the market (Kistruck, Beamish, Qureshi, & Sutter, 2013) and as social entrepreneurs building and constructing an environment for enabling entrepreneurship (Mair & Martí, 2009).

In order to form a more comprehensive picture of the potential of entrepreneurship as a solution to poverty, it is important to understand the potential for growth and job creation of low-income entrepreneurs. Hence, two papers in this dissertation focus on low-income entrepreneurs and innovators. As poverty is reflected in the lack of basic services, this dissertation also studies innovations as a means to assuage the consequences of poverty. In particular,

the focus is with innovations developed by firms established in developed countries but aiming for the low-income population in emerging economies. The third paper of this dissertation highlights the potentials and pitfalls of these innovations.

1.2 Aims and scope of the study

In this light, the aim of this dissertation as a whole is to understand entrepreneurship and innovation in and for the low-income context. The motivation for this question is derived from the need to understand how entrepreneurship in resource-scarce and low-income environments occurs and how it is supported. Another motivation is to understand innovation processes that transcend geographical and cultural boundaries. The overarching goal of this dissertation is to improve the understanding of entrepreneurship as a solution to poverty (Bruton et al., 2013). The overall research question is, *how can entrepreneurship contribute to poverty alleviation?* Further, each paper has its own research question:

1. How do grassroots entrepreneurs scale their enterprises in resource-scarce environments?
2. How are organizations working to support grassroots innovators in becoming entrepreneurs in the context of poverty?
3. How does the network influence cross-cultural entrepreneurial innovation processes?

In the first paper, I explore the scaling process of enterprises of low-income entrepreneurs (Wierenga, 2020). It is a case study of four entrepreneurs from India who have developed, commercialized and scaled an innovation. Having a theoretical lens of entrepreneurial bricolage (T. Baker & Nelson, 2005), the study focuses on the available resources and how they are used. The analysis shows that the scaling grows from operating locally as an entrepreneur utilizing locally available resources to being an entrepreneur on the state-level. Operating on the state-level means doing business with clients, not only from the village of the entrepreneur, but also across the state or in other states in India. This article has been published in the journal *Entrepreneurship and Regional Development* (Wierenga, 2020).

The second paper analyses organizations working to support low-income innovators and entrepreneurs. In this paper, low-income innovators are referred to as grassroots innovators who, despite living in a resource-scarce environment, develop an innovation independently (Gupta, 2016). The paper studies the Honeybee Network, which consists of three organizations based in India that work with low-income innovators and entrepreneurs. The mundane work the organizations perform include different activities for strengthening the skills of the innovators. The intermediation work done is aimed to link the innovators with relevant societal actors to enhance the innovation of their enterprise. The paper also develops the support organization as a distinctive organization that works with grassroots innovators.

Firms based in the developed world are increasingly interested in innovating to develop solutions for many of the grand challenges. Therefore, the third study in this dissertation looks at innovation processes of firms based in a developed country who work on innovations for the low-income populations in emerging economies. These born-global impact firms have since started an ambitious target of having positive development impacts. However, the study shows that it is difficult to materialize the potential for positive impact despite the development of an innovation with such promise. Through effectuation theory and a focus on networks, the analysis shows that local stakeholders and organizational stakeholders have important roles within the network of the firms.

The first two papers explore entrepreneurs from an environment characterized as low-income and resource-scarce from two different angles. The third paper looks at firms from a developed context, innovating for the low-income markets in emerging economies. These papers provide three perspectives on the innovations and entrepreneurship in the low-income context and, in particular, shed light on the actors operating in that context. Together, they provide a holistic understanding on the phenomenon of interest and add to what is already known about entrepreneurship and innovation (Figure 2).

Figure 2 The three papers of this dissertation on entrepreneurship and innovations in the low-income context.

2. Theoretical background

As entrepreneurship scholars have traditionally focused on “high-growth” and “high-wealth-creation” businesses, studies related to the context of poverty have long been absent in the field of entrepreneurship (Bruton et al., 2013). Nevertheless, for decades, poverty has been one of the biggest grand challenges, and despite gaining more attention among scholars, more research is needed to understand entrepreneurship as a solution to poverty (Sutter, Bruton, & Chen, 2019). This theoretical overview aims to give a holistic perspective on entrepreneurship and poverty by considering the phenomenon on multiple levels. After providing an overview of the general literature on entrepreneurship and innovation, the chapter continues with describing the individual level, including the low-income innovators and entrepreneurs, and defining related actors and concepts. Next, the organizational level is discussed through different theories on coping with resource scarcity within firms. Finally, the support and wider institutional environment in relation to poverty is described.

2.1 Entrepreneurship and innovation

This dissertation is positioned theoretically within the field of entrepreneurship, even though the context considered in this dissertation is not commonly considered in that field. Hence, it is important to provide an overview of the wider academic discourse in the field of entrepreneurship and innovation, which will also provide an understanding of the uniqueness of the phenomenon in this dissertation. This is done through articles acknowledged to be fundamental to the field.

The definition of entrepreneurship includes opportunities and individuals “who discover, evaluate, and exploit” those opportunities (Shane & Venkataram, 2000). These opportunities exist and are discovered by entrepreneurs or created through entrepreneurs’ actions (Alvarez & Barney, 2007). Of these, entrepreneurial opportunities are those which generate profit opportunities (Shane & Venkataram, 2000). Discovered opportunities require high search costs and include potential risks, whereas created opportunities evolve over time and involve high uncertainty (Alvarez & Barney, 2007). Exploiting the recognized opportunities is dependent on their expected value, the cost of obtaining resources and perception of the related risk (Shane & Venkataram, 2000).

Entrepreneurship as opportunity recognition or exploitation also relates to innovation. Innovation occurs in any organization, such as companies and non-

governmental organizations, and not every entrepreneur is innovative, as some entrepreneurs imitate others. Innovative entrepreneurship refers to developing routines, competences and offerings different to those already established in the market (Fuentelsaz, Maicas, & Montero, 2018). A study among Swedish firms showed that firms operating with resource constraints behaved more entrepreneurially, and financial slack lead to exploiting current resources rather than developing new ideas (Bradley, Wiklund, & Shepherd, 2011). Individual factors such as entrepreneurial alertness, risk-tolerance and experience relate to innovation and are reinforced by economic freedom (Fuentelsaz et al., 2018).

The focus of the literature on entrepreneurship and innovation has been on the economic activity of exploiting opportunities (Shane & Venkataram, 2000) and the fast-growing entrepreneurial ventures (Welter, Baker, Audretsch, & Gartner, 2017). However, entrepreneurship understood under this light has its challenges, as it re-emphasizes the stereotypes associated with masculine, growth-oriented entrepreneurship and reinforces the discourse dominated by these powerful actors (Calás, Smircich, & Bourne, 2009). Such stereotypes include technology-enabled, fast growing firms funded by venture capitalists that make the owners billionaires, which easily excludes entrepreneurial activities that do not fit within this definition of entrepreneurs (Welter et al., 2017).

Entrepreneurship can also be understood as way to trigger social change (Calás et al., 2009) or to create new organizations (Welter et al., 2017). Further, entrepreneurship can be seen as “a grand socio-economic experience” in which individuals try out innovations (Anderson, Dodd, & Jack, 2012). Viewing entrepreneurship as a social change provides a wider definition of entrepreneurship, where it is seen as a social activity performed by a minority group, and considered for its positive and negative consequences for that group (Calás et al., 2009). Hence, in this dissertation, entrepreneurship is also studied as the function of social change, emancipation and empowerment, in addition to a method for providing the much-needed income to the poor.

Further, low-income entrepreneurs operate in a different institutional setting, which poses unique challenges (Karnani, 2009; Seelos & Mair, 2017) for recognizing and exploiting entrepreneurial opportunities (Alvarez & Barney, 2014). The context considered in this dissertation challenges the current mainstream understanding of entrepreneurial opportunities and of entrepreneurship in general. The majority of the global population lives in significantly different institutional contexts (Mair, Martí, et al., 2012) than the context considered in most of entrepreneurship research. Thus, it is important to diversify the body of existing research.

2.2 Entrepreneurship and poverty

Numerous efforts have been pushed forward to alleviate poverty. The decades-long monetary flows of development and humanitarian aid alone has not been enough. It seems that development projects are not always capable of addressing the right problem, and initiatives might lead to unintended negative

consequences (Banerjee & Duflo, 2012); however, corruption also hinders the full potential of development aid (Moyo, 2009). Relatedly, due to multinational companies practicing tax evasion and taking advantage of the poor legal structures of developing and emerging economies, billions of USD flow out of these countries (R. W. Baker, 2005).

Another proposed solution is the perspective of large multinational companies (MNCs) considering poor people as an interesting and profitable market (Prahalad, 2010). While the initial call for action of MNCs incorporated mere product adaptation to a new market, the second wave stresses the importance of co-creation and involving the poor in the development of solutions (Hart, Sharma, & Halme, 2016). These inclusive markets refer to the integration of the poor as a previously excluded group (Halme et al., 2012). However, only a few co-creation cases have been recorded in academic studies, like the Indian subsidiary of Unilever, Hindustan Lever Ltd, Grameen Bank in Bangladesh and Cemex from Mexico (Kolk, Rivera-Santos, & Ruffin, 2014).

In studies about the business models for the BOP, the poor are considered a distributor, employee or supplier, but in most reported cases, they are merely a consumer (Kolk et al., 2014). The initial premise was on co-creating solutions with the poor. Yet another approach to poverty alleviation is for poor people to act as entrepreneurs, which has also been embraced as a solution to poverty (Bruton et al., 2013). In the following, the different approaches related to entrepreneurship and poverty are introduced.

2.2.1 Low-income entrepreneurs

As the poor have limited skills, long-term employment is difficult to find, and many earn their income from self-employment, which seems accessible by mimicking others (Alvarez & Barney, 2014; Banerjee & Duflo, 2007). Entrepreneurship can be understood firstly as opportunity-motivated, as in choosing to become an entrepreneur, or secondly as necessity-motivated, as in resorting to it from forced circumstances (McMullen, Bagby, & Palich, 2008). The latter is prevailing in emerging economies, where other alternatives for work are insufficient or absent (Dencker, Bacq, Gruber, & Haas, 2019). As entrepreneurship among the poor is typically based on necessity, the poor entrepreneur would rather work in factories with an employment relationship than as an entrepreneur (Karnani, 2009). For example, necessity-motivated entrepreneurs might not understand signs that come from the market, nor do they have an incentive to invest in their product and service offering; hence, the entrepreneurial ventures of these entrepreneurs tend to be imitative, with lower profit margins and entrepreneurial rent (McMullen et al., 2008).

The type of entrepreneurial ventures of the poor depends on environmental factors but also on the human, social and financial capital available (Bradley et al., 2012). Hence, the poor tend to have multiple occupations to reduce the risk of not earning enough in one occupation and not having the means to invest in specializing in one occupation (Banerjee & Duflo, 2007). For example, when there is less work on the field, the agriculture worker migrates to the nearest city and works in construction or sells goods on the streets.

McMullen and his colleagues (2008) have also found that opportunity-motivated entrepreneurs are more innovative and generate higher returns in comparison to necessity-motivated entrepreneurs who mostly imitate their peers. Innovations are either differentiation-related, meaning they are unique in relation to a competitor, or novelty-related, meaning that the innovation is new to the community (Bradley et al., 2012). This same study shows that the novelty-related innovations are more likely to improve firm performance.

2.2.2 Grassroots entrepreneurs

As described above, low-income entrepreneurs are typically necessity entrepreneurs and subsistence entrepreneurs with little possibility to differentiate on the market against the competition. The typical low-income entrepreneur does not have the desire to grow their business, even if they have the means available. They do not have the skills, vision, creativity or persistence to grow their business and be true entrepreneurs, and the legal and regulatory framework does not protect the poor (Karnani, 2009). However, there is an increased awareness of these entrepreneurs as innovative problem-solvers who turn their innovation into an entrepreneurial venture. Further, Prahalad (2010) also reasoned that low-income entrepreneurs can be entrepreneurial by choice, calling them “resilient and creative.” These entrepreneurs are referred to as grassroots entrepreneurs (Gupta, 2016; Sarkar & Pansera, 2017; Shepherd, Parida, & Wincent, 2017). Perhaps it is therefore fair to say that they have an entrepreneurial drive, are risk-takers and have a desire to be in control rather than become rich by selling their venture to a corporation.

Related is the concept of grassroots innovation, which describes innovations developed by the grassroots entrepreneurs. These are created as a response to a failure in the public system to deliver certain products or services (Gupta, 2013; Hossain, 2016). The people living at the bottom of the economic pyramid might be poor, but they “are not at the bottom of the knowledge, ethical or innovation pyramid,” Gupta (2013) argues. Many scholars seem to agree that innovations developed by grassroots entrepreneurs have the potential to contribute to solving local social ills (Gupta, 2016; Hossain, 2016; Pansera & Sarkar, 2016).

Grassroots innovations emerge often, although not only, bottom up from the community level instead of the corporate level (Hossain, 2016). These grassroots innovation actors include both local community actors and people and organizations from outside the communities working with local ideas (Smith, Fressoli, & Thomas, 2014). These are, for example, the actors in the Social Technologies Movement in Brazil and the Honeybee Network in India. Across geographies, these actors strive for an inclusive innovation environment and to link the grassroots to institutions that promote science, technology and innovation (Fressoli et al., 2014). The challenges these collective actors face relate to balancing local relevance with wide-spread scalability and working while simultaneously changing the institutional settings inappropriate for the grassroots actor (Smith et al., 2014).

This dissertation aims to further develop the concept of the grassroots entrepreneur and highlight the uniqueness of this type in comparison to low-income entrepreneurship typically referred to in the literature.

2.2.3 Inclusive innovation

Inclusive innovation refers to a new idea—a product, a service or a business model—for benefitting the poor and disenfranchised people and improving the social and economic wellbeing of marginalised people in society (George, McGahan, & Prabhu, 2012). The definition incorporates that both the outcome and the innovation process are inclusive (George et al., 2012), and that the process involves poor people in the development process (Halme et al., 2012).

These innovation and entrepreneurship processes are widely studied also as co-creation processes (Nahi, 2016). Co-creation is mainly understood as the context of a firm, its customers and “the co-development of new offerings” (Grönroos & Voima, 2013; Payne, Storbacka, & Frow, 2008). Co-creation, in the context of business with the poor, is defined by scholars as interaction and iteration between different partners as well as the sharing of knowledge and capabilities (Nahi, 2016).

The partners considered are, for instance, small local businesses, civil society organizations, BOP communities and large companies, and the collaboration is often facilitated by an NGO or other type of social intermediary (Nahi, 2016). For example, the role of universities, often Western universities, in the initiation of entrepreneurship and innovation for low-income markets has been recognized since the outset of the academic debate. Many of the case studies most frequently discussed in media have originated from university courses, encouraging entrepreneurship and innovation for low-income settings.

The co-creation approach can depend on the corporate strategy (Halme et al., 2012). Co-creation can be classified as business-driven or empowerment-driven and as focused only on certain groups or as inclusive (Nahi, 2016). When operating within the comfort zone of the company, the partners are the diaspora staff members from the target market, and the aim is to merely create business for the company. Moving away from the familiar into a deeper and wider co-creation approach, local communities and poor people are actively participating in the process, and the company’s aim is to empower these people.

Co-creation among cross-sectoral partners knows many challenges, as organizations with different goals and value systems work together (Sharma & Bansal, 2017). Organizations appreciating each other’s differences, being open to learning and engaging with the other partners have more successful collaborations.

2.2.4 Other related concepts

As the literature on low-income entrepreneurship has grown, it has also started to branch out into concepts related to the discussion on low-income entrepreneurship. For example, focusing more on the innovation, frugal innovations are products targeted at the resource-constraint consumer at a low

cost but with high value (Zeschky, Widenmayer, & Gassmann, 2011). The products are of superior value, minimalistic in terms of resources used and answer an urgent need to an extent that they improve poor people's quality of life (Radjou, Ahuja, & Prabhu, 2012). The products are designed by using minimal and economized resources, for instance, by reusing components and stressing a simple, no-frills design (Rao, 2013).

Another related concept is social entrepreneurship, which serves as an umbrella term for organizations that want to pursue a social objective and actualize social change through economic activities (Mair, Battilana, & Cardenas, 2012). Social entrepreneurship can relate to empowering women, and the increase in individual agency can lead to social change (Haugh & Talwar, 2016). On a more critical note, the grand narrative of social entrepreneurship unconsciously accepts that social entrepreneurship has the potential to be an extensive solution to global problems, but the private sector involvement might ignore the political aspects related to social change (Dey & Steyart, 2010).

On many occasions, poverty and entrepreneurship are strongly linked to microfinance. The principle idea is to borrow small microloans to poor people, which would then stimulate starting or expanding their entrepreneurial activities (Khavul, 2010). Microcredit as a development instrument has a broad positive impact, especially in hostile environments where microcredit facilitates the establishment of semi-formal institutions (Chliova, Brinckmann, & Rosenbusch, 2015) and among female entrepreneurs through the increased financial control they gain (Khavul, 2010).

Critical studies on entrepreneurship have also emerged, exploring entrepreneurship as a social change, especially in the area of female entrepreneurship (Calás et al., 2009). Entrepreneurship for women is a means to overcome obstacles, to feel empowered in male-dominated power structures and to feel emancipated to take actions towards change (Alkhaled & Berglund, 2018). However, in situations of poverty and isolation, it is difficult to start with entrepreneurial activities (Scott et al., 2012). These studies also show that entrepreneurship as a social change includes both the experience of suppression and empowerment, leading to emancipation (Alkhaled & Berglund, 2018; Calás et al., 2009).

However, results have shown that microcredit is not the Holy Grail for poverty reduction, despite early excitement. For example, the United Nations declared 2005 as the International Year of Microcredit. The critique is that microcredit and micro-lending do not provide the stable income and growth trajectory needed to alleviate poverty (Karnani, 2009). Additionally, social and environmental impacts of entrepreneurial activities are increasingly gaining attention. Studies show that ignoring social impact in policy development and not targeting policies towards the needs of the low-income populations creates destructive entrepreneurship (Hall, Matos, Sheehan, & Silvestre, 2012). The same study also shows that policies slowing down economic growth and encouraging local innovation, lead to inclusion.

Bringing together these concepts and literature streams introduced here, I have developed a visualization on how they are interlinked (Figure 3). Entrepreneurship includes the concepts of social entrepreneurship and low-income entrepreneurship, which partially overlap. Grassroots entrepreneurship is a distinct category of low-income entrepreneurship (Wierenga, 2020). As these entrepreneurial activities can also have societal relevance, this concept also overlaps with social entrepreneurship.

Figure 3 The linkages of literature streams central in this work

2.3 Entrepreneurship and coping with resource-scarcity

A number of theoretical perspectives have emerged to explain entrepreneurial action. The most popular of these are entrepreneurial bricolage (T. Baker & Nelson, 2005) and effectuation theory (Sarasvathy, 2001). These two theories have a number of features in common (Fisher, 2012). Firstly, they both consider the resources as the point of departure and the entrepreneurs as a force acting on the opportunities created by and with the means available. Secondly, both theories emphasize the role of action in problem solving over conceptual thinking and pondering. Thirdly, instead of seeing the stakeholders around the firm as customers, competitors and suppliers, both theories consider them primarily as partners.

Lastly, the starting point of these is the penurious environment in which a firm operates (T. Baker & Nelson, 2005) and the means available to the entrepreneur (Sarasvathy, 2001). For example, in the original work of entrepreneurial bricolage, Baker and Nelson (2005) studied 29 firms from different industries that operate with resource-constraints. Sarasvathy (2001) described entrepreneurs as those who shied away from goal-oriented planning associated with the causation logic but who started with the available resources, networks and skills. Hence, these theories help to explain entrepreneurial action in the context of resource scarcity. In the following, both entrepreneurial bricolage and effectuation theory are introduced.

2.3.1 Entrepreneurial bricolage

When a firm is faced with resources constraints, there are three possible outcomes—either acquiring more resources, choosing not to take up new challenges or engaging with entrepreneurial bricolage (T. Baker & Nelson, 2005). Bricolage originates from anthropology and a comparison between the engineer and a handyman, which acts as a bricoleur (Fisher, 2012). Entrepreneurial bricolage is defined as “making do by applying combinations of the resources at hand to new problems and opportunities” (T. Baker & Nelson, 2005). Different forms of bricolage have been identified in different industries and firm types. Financial bricolage refers to early-stage ventures that creatively approach the issue of funding and gather small loans from several sources (Kariv & Coleman, 2015). Social bricolage is the bricolage approach used by social enterprises constrained with resources. These actors seek active stakeholder participation and use persuasion as a tactic to get more people involved and, by that, increase their available resources (DiDomenico, Haugh, & Tracey, 2010). Employees in large firms may engage with intrapreneurial bricolage practices to pursue their vision in conditions where the employer blocks those activities (Halme et al., 2012).

In entrepreneurial bricolage, resources are considered to be the network, physical resources, financial resources and business practises (T. Baker, Miner, & Eesley, 2003). These resources can be free or available for cheap, and are often considered worthless to others (T. Baker & Nelson, 2005). Network bricolage refers to the pre-existing network of the entrepreneur, which is, in certain situations, the only resource available and can influence the founding process of a new venture (T. Baker et al., 2003). Contrary, resource-seeking refers to actively searching for useful contacts and seeking opportunities not at hand (T. Baker et al., 2003).

Entrepreneurial bricolage has three core elements. Firstly, resources at hand refers to the resources a bricoleur has collected over time, thinking they might come in handy at some point (T. Baker & Nelson, 2005). Secondly, combining resources means using existing resources and elements of resources for new purposes (T. Baker & Nelson, 2005). Lastly, bricolage is an action-oriented theory that refers to testing the conventional limitations that oppose the entrepreneur by resource scarcity (T. Baker & Nelson, 2005). For example, measuring social impact, social entrepreneurs can use existing but undervalued data in new ways (Molecke & Pinkse, 2017). Bricolage is often linked with improvisation, as studies show that bricolage proceeds improvisation, but not showing improvisational behaviour might still lead to bricolage (T. Baker et al., 2003). However, improvisation can be understood as combining and executing almost simultaneously, whereas in bricolage, the timespan is much longer (T. Baker et al., 2003).

From a firm growth perspective, the bricolage approach is not always an appropriate one. For example, using bricolage in multiple projects simultaneously harms the firm’s ability to focus and specialize, therefore making the firm unlikely to grow (T. Baker & Nelson, 2005). High levels of bricolage might also be harmful for the innovativeness of the firm (Senyard,

Baker, Steffens, & Davidsson, 2014). At the same time, being selective with using bricolage is beneficial, as it might lead to establishing business routines (T. Baker & Nelson, 2005).

2.3.2 Effectuation theory

Effectuation theory was developed to explain the emergence of new firms as a process based on control, as opposed to the causation logic based on prediction (Sarasvathy, 2001). While causation takes a set of effects as the starting point, effectuation theory considers the means as the starting point. To introduce this difference, Sarasvathy (2001) uses the metaphor of a chef. Following the causation logic, the chef thinks of a meal to prepare and purchases the necessary ingredients for it. However, in the effectuation logic, the chef would start with the ingredients in house and prepare a meal using these as the available means.

The effectuation theory has five principles. It starts with the bird-in-hand principle, referring to the entrepreneur and the available means which are the identity, knowledge and network (Sarasvathy, Kumar, York, & Bhagavatula, 2014). These are explored through the questions of “who am I,” “what do I know” and “whom do I know?” (Dew, Read, Sarasvathy, & Wiltbank, 2008). With the available means, the entrepreneur asks, “what can I do?” and imagines several courses of action (Dew et al., 2008). The second principle of affordable loss implies that entrepreneurs focus little on predicting the future and possible gains (Sarasvathy et al., 2014). In an effort to minimize risks, entrepreneurs think in terms of what they can afford to lose (Sarasvathy, 2008).

An essential part of effectuation theory is interactions with stakeholders and searching for commitments from new or existing stakeholders (Dew et al., 2008). Through the commitments, it is possible to predict the future, as the commitments secure the future (Sarasvathy, 2008). This third principle is the crazy quilt principle (Sarasvathy et al., 2014). The question of opportunity cost is irrelevant, as the entrepreneur is only trying to find those who are willing to commit to the artefact but also those dedicated to building a new market (Sarasvathy, 2008). Through the commitments from stakeholders, the entrepreneurs gain new means that help in the entrepreneurial process. Likewise, they also gain new goals that might alter the direction of the firm.

Empirically, the effectuation theory has been used to study the emergence of a social enterprise, “Fairphone” (Akemu, Whiteman, & Kennedy, 2016). Even though the founders’ initial aim was just to raise awareness and campaign against conflict minerals, a social enterprise was established. The network around the social enterprise pushed for developing a commercial product and was a supporter throughout the process. In this case, commitments from the stakeholders were stimulated by a material artefact meaningful to the network, which was, in this case, a smartphone produced with conflict-free minerals (Akemu et al., 2016).

Effectuation theory is mostly applicable to environments characterized by high levels of uncertainty and complexity (Sarasvathy, 2008). This is related to the fourth principle of turning lemons into lemonade, meaning that effectual entrepreneurs are open to contingencies which might turn the direction of the

firm (Sarasvathy et al., 2014). The fifth principle of the pilot in the plane refers to the agency of the entrepreneur in an uncertain environment and the intervening of the events happening in that environment (Sarasvathy et al., 2014). As it is impossible to know how things turn out, an effectual entrepreneur focuses on the knowns and talks with stakeholders to get feedback from the market (Sarasvathy, 2008).

Effectuation theory has also received criticism from other scholars. For example, some have criticized its theoretical foundations. This argument is based on issues like insignificant acknowledgement of rivalry powers, little clarity on the applicable context and its boundary conditions as well as the focus on expert entrepreneurs (Arend, Sarooghi, & Burkemper, 2015). Others debate the distinction between effectuation and causation. For example, a recent study shows that whether an entrepreneur shows an effectuation logic or a causation logic depends on the perceived level of uncertainty (Jiang & Tornikoski, 2019).

2.4 Entrepreneurship and support

As entrepreneurship and resource-scarcity do not occur in isolation, it is important to also discuss the broader system around the entrepreneurs. For example, a recent study showed that collaborative innovating is a joint effort of multiple stakeholders rather than just collaboration between specific groups (Goodman, Korsunova, & Halme, 2017). In this study, the secondary stakeholders, such as public institutions and academic institutions, were more important for sustainability innovating than primary stakeholders, such as suppliers (Goodman et al., 2017). Further, the emergence of the social enterprise Fairphone portrayed that a social movement as a network of several actors can help to overcome barriers, such as the lack of certain expertise (Akemu et al., 2016).

Social intermediaries, which connect the disadvantaged and low-income entrepreneurs with developed country markets, aim to lower transaction costs and make markets more efficient through capacity building of the BOP actors (Kistruck et al., 2013). Similarly, NGOs act as intermediaries between BOP consumers and companies, whether foreign-based or local, to overcome institutional barriers of entrepreneurship (Webb, Kistruck, Ireland, & Ketchen, 2010). In order to assist low-income entrepreneurs in pursuing their innovative business ideas, they need specified skills from those supporting them. This includes recognizing and capitalizing on opportunities (Bradley et al., 2012). Networks of the low-income entrepreneur are key for learning new skills and expanding grassroots innovations beyond immediate surroundings (Hossain, 2016). Operating in an environment with supportive levers, low-income entrepreneurs that are driven by necessity can be more experimental and leverage their existing skills (Dencker et al., 2019).

Institutions are the rules guiding social life through normative obligations or facts which are taken into account by actors (Meyer & Rowan, 1983). Influencing the institutional environment is referred to as institutional work, meaning intentional activities taken by actors to change, maintain or disrupt

their institutional environment (Lawrence & Suddaby, 2006). It can be, for example, temporal institutional work (Granqvist & Gustafsson, 2016) or practice work and boundary work (Zietsma & Lawrence, 2010). Temporal institutional work considers time, and different perceptions of time enable change in institutions (Granqvist & Gustafsson, 2016). Practice work is the creation, maintenance and disruption of practices as the routines shared by a group (Zietsma & Lawrence, 2010). Finally, boundary work refers to the establishing, managing and breaching of boundaries around established categories of objects, people and activities (Zietsma & Lawrence, 2010). Organizational change processes are often seen as projects and can hence be considered as a form of temporal organizing, which can also be a useful categorization for institutional change (Granqvist & Gustafsson, 2016). In environments characterized by institutional change, transition happens if the boundaries are compromised or disputed and the actors have the capacity to create new boundaries and new practices (Zietsma & Lawrence, 2010).

Studies linking entrepreneurship with institutional research exist. For instance, a social enterprise can act in an environment with institutional voids as an institutional entrepreneur to establish the missing market institutions (Mair & Marti, 2009). More recently, a study looked at “the absence or presence of supportive institutional levers,” which could provide funding, training and capacity building support (Dencker et al., 2019). Nevertheless, it is important to further increase our understanding of the institutional settings in the context of poverty and the means for institutional work to change the lives of the poor (Martí & Mair, 2009).

2.5 Theoretical framework of this dissertation

The resources in this entrepreneurial context are understood broadly as social, human and financial capital (Bradley et al., 2012). For example, entrepreneurs growing up in conditions of poverty tend to not finish even primary education, let alone continue to secondary or higher education. This means that, due to the limited number of years in education, they learn less. They also meet considerably less people who could be helpful for the entrepreneurial venture from the entrepreneurship perspective; their network consists of people similar to the entrepreneur, providing little benefit (Wierenga, 2020). This translates into less human capital, limited social capital and inadequate financial capital. Similarly, an entrepreneur with a more-educated background will have a broader set of expertise, skills and knowledge, a broader network and better access to financial instruments. When some resources are missing, educated entrepreneurs will have the means and abilities to find additional resources by themselves or through interacting with stakeholders. Understandably, this is a general description, and exceptional cases can be found on both extremes.

As the institutional environment influences the motivation for entrepreneurial action, I want to go back to the distinction of entrepreneurship as necessity-motivated and as opportunity-motivated. When rule-of-law prevails and property rights are enforced, entrepreneurs tend to be motivated

by opportunity, whereas necessity-motivated entrepreneurs start with an entrepreneurial venture as the last resort and regardless of the institutional environment (McMullen et al., 2008). However, it might be argued that for these entrepreneurs, it is precisely the institutional environment that contributes to the lack of other alternatives and the type of ventures they pursue. For example, property rights, as in the right of ownership of a property, encourages innovativeness and investment in improving the goods and services offered, but among necessity-motivated entrepreneurs, this is not the case, hence their entrepreneurial ventures tend to be imitative in nature (McMullen et al., 2008).

Figure 3 Unique operating environment of low-income entrepreneurs

To clarify the uniqueness of the research setting and to show the difference between low-income entrepreneurs and general entrepreneurs, I have developed a framework (Figure 4), positioning both categories of entrepreneurs in the broader institutional context in which they operate. The figure shows the institutional boundaries that restrain the low-income entrepreneur and their limited available resources. At the same time, the general entrepreneur operates in an institutional environment with more resources, which is more favourable for entrepreneurship. As the arrows show, these entrepreneurs operate, or at least try to operate, across boundaries with each other. While all entrepreneurs to some extent deal with limited resource availability, low-income entrepreneurs operate within the institutional boundaries opposed to them. The boundaries cause low-income entrepreneurs to have limited access to resources and less space to manoeuvre. The difference between low-income entrepreneurs

and entrepreneurs in general is not always explicit, and the figure aims to illuminate the differences.

In conclusion, this dissertation studies low-income entrepreneurs and the support structure around them (papers 1 & 2). At the same time, this dissertation also aims to understand the challenges related to cross-border and cross-cultural entrepreneurial innovation processes where the entrepreneurs are well-embedded in one environment but outsiders in another (paper 3). Therefore, this dissertation aims to understand how entrepreneurs cope in these complex environments.

3. Methodological approach

This dissertation started with the interest in low-income entrepreneurs. Fundamental to the journey was the access to the cases studied in both India and Finland. The study took a grounded-theory approach and used a case study methodology with data from India, Finland and the United States.

3.1 Philosophical underpinnings

The philosophical position of the study is social constructivism, which influences the research questions asked. In this, I follow the perspective that the meaning of entrepreneurship is socially constructed (Anderson et al., 2012). The main topic of this dissertation is poverty as an experienced reality of some and, more specifically, the activities and processes in this particular context. Meaning is very situational, created by a shared history, experience and communication; thus, shared meaning between groups is not always common (Locke, 2001). The role of the researcher is to be an active participant and to engage in the social world of the research participants. Hence, the researcher does not claim to be objective and carries some level of agency in the research process (Locke, 2001).

Epistemology refers to the philosophy of knowledge and aims to answer the question, “What is knowledge?” Ontology refers to being or existing, and aims to answer the question, “What can be said to exist?” Both the epistemological and ontological starting points of this dissertation are social constructivist. Instead of searching for objective truths, the aim of the research is subjective and intends to understand how those experiencing the reality perceive it. Hence, this dissertation does not attempt to state the truth about entrepreneurship in and for low-income markets, but rather share the reality constructed by those living in it. Considering the bias of the researcher and the complexity of the issue, this dissertation constructs a view on reality as the lived experience of those participating in it and as interpreted by the researcher.

Theory has many meanings within academic discussions. It can mean, in a philosophical way, looking at the social world and providing a causal explanation with factors and conditions, or refer to complex arguments of classic authors (Abend, 2008). In the spirit of doing qualitative empirical research, in this dissertation, theory is a way to make sense of the empirical world (Abend, 2008). These perspectives are reflected in the methodological choices described in the following.

3.2 Research process

The research process followed a phenomenon-based approach, which is a way to explore complex social phenomena with relevance for both the scholarly community and practitioners (von Krogh, Rossi-Lamastra, & Haefliger, 2012). In phenomenon-driven research, the research process starts with a strong research question, which can relate to emerging and developing economies and other global micro and macro-level phenomena (Doh, 2015). Since the beginning of my doctoral studies, my research interest has been on social ills, including poverty and global inequality; hence, the research question of this dissertation evolved around resource-scarcity, low-income populations and innovation processes.

The chosen research strategy was grounded-theory, as the research aims to develop theories that are grounded in the real world and relevant to the social actors of that real world (Locke, 2001). In line with the philosophical standing point of this dissertation, the research follows the approach of inductive qualitative research and the grounded theory approach. Furthermore, fieldwork-based methods, such as the case study method and ethnography, are typically used in grounded theory research (Locke, 2001), and for that reason, this dissertation is based on case studies.

In order to answer the research question, the first step was to determine the cases to be studied. As a case-study based research, a case is understood as an entrepreneurial venture, initiated by a low-income innovator or a startup founded by a Western entrepreneurial team. In each paper, multiple cases are covered, as this approach fits with the research question and provide more insights than a single case study. I used a theoretical sampling method to identify cases that could provide an answer to the research question and are information rich (Patton, 1990). Considering the relatively challenging circumstances for data collection, the cases had to be also accessible. A more detailed explanation on the selection criteria is included in each paper. However, the selected cases for each paper are introduced in Table 1.

Paper	Name of case organization	Description
Paper 1	Mitticool	Starting from tableware and pans made out of clay, the most famous innovation is a clay fridge
	Bullet Santi	A three-wheeler tractor built around a motorcycle engine
	Groundnut digger machine	A machine for harvesting ground nuts instead of manual harvesting
	Cotton stripper machine	A machine which automates the removal of cotton from its shell

Paper 2	Sristi	An NGO scouting for grassroots innovations
	GIAN	An organization working as an accelerator for grassroots enterprises
	National Innovation foundation	A governmental organization supporting grassroots entrepreneurs, in charge of a fund for supporting the innovators
Paper 3	Embrace	A sleeping bag to keep prematurely born babies warm and therefore lower infant mortality
	Clean Inc.	A water filter to purify drinking water to increase access to clean water
	Solar Fire Concentration Oy (GoSol)	A solar energy powered oven that also provides entrepreneurship opportunities while tackling energy poverty
	Fuzu	An online recruitment platform to match skilled workers with employers and guide jobseekers to suitable trainings

Table 1 The cases used in this dissertation

Data collection took place in several rounds and was gathered from multiple sources. It started with searching for archival material available online, as it helped to develop an understanding of the cases and to assess the relevance of the case for the overall research. For Paper 1 and Paper 2, I collected data also during a six-week field visit to India (3.3), but the data for Paper 3 is mainly collected through interviews conducted in Finland. The fieldwork in India included interviews as well as observations and reflective research memos. Other qualitative studies from similar environments conducted interviews through intermediaries (Shepherd et al., 2017) or by researchers fluent in the local language but with translation understood by everyone (Khavul, Chavez, & Bruton, 2013). Often, field research situations are quite chaotic (Sutter, Webb, Kistruck, & Bailey, 2013), but authors unanimously agree that personal immersion in the field has been crucial in the analysis and development of the findings (Halme et al., 2012; Khavul et al., 2013). As entrepreneurship is a complex construct with highly contextualized meaning, it is important that the researcher is embedded in the context (Anderson et al., 2012). Hence, this research has benefitted from the researcher's field presence and her personal data collection.

Because this is a study with multiple cases and data sources, it was difficult to pinpoint where the number of cases and the amount of data was enough. Further, due to the field work settings in India, it was not easy to return to the

field for further data collection. However, because the field research was well-planned and well-executed, returning was unnecessary. The planning required time, collaboration with relevant partners and trust from the actors involved. This process is explained in more detail in the following chapter.

3.3 Approach to the field work in India

It is acknowledged, that collecting data in the context of poverty can be challenging (Bruton et al., 2013). Much of the established literature on methodological questions, gaining access and doing field research is focused on large organizations in formal settings (Cunliffe & Alcadipani, 2016; Locke, 2001). Despite the challenging conditions for a researcher, it is important to pursue data collection on low-income settings in the field to further understanding of the true nature of phenomena related to poverty, inequality and sustainable development (Hart et al., 2016). When conducting field research, it is important to reflect on the research process (Locke, 2011) and to share the backstage story of the research process with the readers of the research (Cunliffe & Alcadipani, 2016). In that light, here is a detailed account from my field research in India from fall 2017.

Following the interpretive paradigm to research, my approach to the field work was guided by deep engagement with the research setting (Locke, 2001). As I had been to India and to Gujarat specifically before, I had some level of familiarity with the cultural, environmental and social setting in which I collected the data. Moreover, I started working with an Indian research assistant half a year before the field work started. This gave me the opportunity to more broadly share my research interests and field research aims with him. We found mutual interests, which lead to a deep engagement and sense of commitment between us. It is also important to note that, ideally, the personal bonds of the team make going into the field a venture based on trust and professionalism, as there might be situations where one has to rely on another. Working closely with an Indian research assistant also helped with interpreting the experiences from the field, as other studies are also suggesting (Halme et al., 2016). For example, as an outsider to the Indian caste system, it was important to work with someone who could explain the position of the entrepreneurs in the caste hierarchies.

Working as a team, the research assistant negotiated initial access to the field with Sristi, an NGO working to support low-income innovators and entrepreneurs. Getting access to Sristi was facilitated by our linkage to a local prestigious university and personal ties of the research assistant. As each entrepreneur operates independently, we had to negotiate access with every participating entrepreneur. However, as Sristi is a trusted organization among the entrepreneurs and acted as our sponsor, consent was a relatively smooth process.

My approach to the field work was also guided by the respect towards the case entrepreneurs and the curiosity of their origins. From the beginning, it was clear that I wanted to visit them in their factories instead of inviting them to

Ahmedabad, the major city in Gujarat. Some of the entrepreneurs were surprised by this and offered to come to the city. Appreciating the offer, we insisted on visiting the entrepreneurs in their everyday habitats. This was instrumental in showing our commitment, which is important to gaining the trust of the research participants (Cunliffe & Alcadipani, 2016). We arrived with a translator of the local dialect to create an environment that made the participants feel comfortable and to smoothen the interview process. This was important, as not all the research participants were comfortable with speaking in Hindi, which was the research assistant's mother tongue.

We met with six entrepreneurs, six users of innovations developed by the entrepreneurs, six representatives of support organizations and one family member of an entrepreneur. We disclosed to the entrepreneurs at the beginning of the interview that I come from Finland, the interview is part of my PhD research and that we are interested in their life story as they have experienced it. We had a similar approach to all the entrepreneurs and did not single out specific topics such as scaling (Paper 1) nor the support received (Paper 2). Hence, I paid attention to these questions when the stories started to repeat themselves.

We asked from the participating entrepreneurs only their time. They granted us time between 3 to 6 hours, and in return, we gave them a box of Indian sweets. This was negotiated together with the research assistant, and because it was something local and small, it was considered appropriate. To not disturb the interview, the gift was given at the end. We also exchanged business cards with each entrepreneur.

In addition to the interviews, we also asked for a tour in the factories of the entrepreneurs. A typical factory was a big hall with only a few windows, filled with unfinished machines, spare parts and a handful of workers (Picture 1). I recorded these observations as pictures and videos and also noted them in a notebook. After returning from the field, I digitalized my notes as soon as possible to ensure the trustworthiness of the study. To embrace the experience of the field visit and to fully dive into the lived experience of the entrepreneurs interviewed, I typically spent one full day writing field notes and research memos, and organizing the visual data.

Picture 1 The factory of Mansukhbhai Patel where the cotton stripper machine is produced (October, 2017)

Since my aim was to focus on the depth of the study, I also interviewed users of the innovations and the network contacts. This provided a broader perspective on the cases and gave further background information. Other studies on grassroots entrepreneurship in India (Joshi, 2015; Pansera & Sarkar, 2016) used a similar approach but neglected the perspective of the network. Conducting the interviews myself and spending as much time with the entrepreneurs as they were able to give, I could also conduct field observations and collect visual data in pictures and videos. This is also valuable data not only to understand the context but also directly contributing to the research.

While we had access and could spend time with the research participants, it was difficult for me as a foreign researcher to interact with them, as I did not share a language with them. In the interview situation, the research assistant asked the questions and occasionally translated for me. This allowed me to follow the conversation and identify interesting aspects with further questions. However, as I could receive the full transcript of the interviews only after the interviews, I was relying also on the research assistant to ask follow-up questions when required. Not understanding and not being able to participate in conversations led to a feeling of lacking situational control, which occasionally proved difficult. Other difficulties related to working in remote areas were feelings of dizziness and nausea caused by motion sickness while driving, wariness of the sources of water offered by the entrepreneurs and long work days.

3.4 Analysis

Following the principles of inductive research, the analysis was inspired by the grounded theory approach (Locke, 2001) and the Gioia methodology (Gioia,

Corley, & Hamilton, 2013). The analytical process is a creative process going back and forth between the data and literature. Especially at the start of each analytical process, I was strongly engaged with the data. Typically, I spent days reading through the interview transcripts, reports, case studies and other data material. In this phase, I wrote research memos about the interesting insights and thoughts. My focus has primarily been on the process (Gioia et al., 2013) and how constructs evolve over time instead of the variance between constructs (Eisenhardt, 1989). Through several rounds of coding and closer engagement with the literature, developing data structures and theory models (Gioia et al., 2013), I arrived at the findings and theoretical contributions as described in each paper.

It is a creative process to move from raw data to processed data, findings and eventually theory, and therefore it is also unique for each study. Hence, each paper has a detailed account of the analytical process. However, an additional description on how the three papers are interwoven follows. I started working with Paper 1 first, followed by Paper 2 and concluding with Paper 3. As I was working on Paper 1, new questions arose. Further, I had conducted interviews with the supporting organizations, but these were underutilized in Paper 1. Therefore, paper 2 became a spin-off of paper 1.

In the spirit of the grounded theory approach, theory explains the relationship between constructs and provides deep insights into a phenomenon (Gehman et al., 2018). Contrary to statistically generalizable results of deductive research, the findings of inductive work are analytically generalizable. This means that a large number and range of empirical observations lead to theory, which is generally applicable to similar phenomena in different contexts (Locke, 2001).

4. Summary of papers

4.1 Paper 1: Uncovering the Scaling of Innovations Developed by Grassroots Entrepreneurs in Low-income Settings

Of the many ways to alleviate poverty, including policy and development aid, entrepreneurship has gained attention from scholars in recent years. Entrepreneurship as an income generating activity seems to be an attractive solution to poverty. In understanding this, the literature on low-income entrepreneurship has focused on the distinction between necessity-motivated and opportunity-motivated entrepreneurship (McMullen et al., 2008). Typically, low-income entrepreneurs are considered to be driven by the lack of other alternatives and hence become entrepreneurs out of necessity. However, the starting point for this study is with innovative, low-income entrepreneurs who have built an enterprise around their innovation.

Firm growth and scaling are important issues for any firm. In the context of low-income entrepreneurship, it helps further the understanding of the poverty-alleviating potential of entrepreneurship. When a firm grows, its ability to employ people also increases. While the scaling of firms of low-income entrepreneurs is an important question (Hart et al., 2016), scholars have discussed these questions as being difficult (Shepherd et al., 2017) and that entrepreneurs would need additional resources for scaling (Linna, 2013). Hence, this article investigates how grassroots entrepreneurs scale their enterprises in resource-scarce environments. Scaling is understood in this context as selling to customers outside the village and family of the entrepreneur.

This paper is anchored in the entrepreneurship theory of bricolage. In addition to entrepreneurial bricolage (T. Baker & Nelson, 2005), other types of bricolage are social bricolage used among social entrepreneurs (DiDomenico et al., 2010) and intrapreneurial bricolage when the resources available to company employees are constrained (Halme et al., 2012). Hence, bricolage appeared to be also relevant for the low-income context.

The study is based on four cases of entrepreneurs based in India. Firstly, Mansukhbhai Prajapati has developed several clay innovations, of which the most well-known is the Mitticool fridge. Mansukhbhai Jagani has developed a multipurpose tractor called Bullet Santi, which is mainly used by cotton farmers. Thirdly, Mansukhbhai Patel developed the Chetak Cotton Stripper, which automates the work of removing cotton from its shells, which was previously done mainly by women and children. Lastly, Sanjay Tilwa developed the groundnut digger machine to automate the laboursome work of harvesting

groundnuts. The data for this study comes from field work and archival data collected from various sources. The analysis was inspired by a grounded theory approach, loosely following the Gioia methodology (Gioia et al., 2013).

The findings illuminate the scaling process from operating locally to operating on the state-level as an entrepreneur. To operate locally, the grassroots entrepreneurs use locally available resources and their own problem-solving attitudes. As the network of the entrepreneurs grow, they start to work with organizations whose mandate is to support low-income entrepreneurs. They recognize the entrepreneurs publicly and formally, which leads to the co-construction of the legitimacy of the low-income entrepreneurs as entrepreneurs. The increased network consists of customers, representatives of the organizations supporting them and their extended networks.

While the scaling process of grassroots entrepreneurs appears to apply to the scaling of any entrepreneur, the difference lies in the point of departure. The grassroots entrepreneur starts from a position of isolation. The reason for this is firstly the isolation in terms of remote geographical location and secondly the perception the entrepreneurs have of themselves as being uneducated and therefore unskilled to operate with formal actors. For these reasons, co-constructing the legitimacy of the grassroots entrepreneurs is an important step in the scaling process. It has an effect both on the legitimacy of the enterprise in the eyes of other stakeholders and as increased self-confidence of seeing themselves as legitimate entrepreneurs.

In addition to the scaling model, the study also demonstrated grassroots as a distinct archetype among low-income entrepreneurs. Grassroots entrepreneurs develop, commercialize and scale innovations. The study also shows that the innovations responded to a need in the market and were complex enough to not be imitated. Hence, the idea of founding a company around the innovation had the potential to generate earnings for the entrepreneurs. Lastly, the paper also develops the concept of grassroots bricolage as a type of behavior shown by the grassroots entrepreneurs in utilizing both tangible and intangible resources, such as their network, in new and unforeseen ways.

4.2 Paper 2: Support organizations as actors in the poverty alleviation sphere

Entrepreneurs are faced with risks which might harm the entrepreneurial activities, but acting in the low-income context, entrepreneurs face additional barriers. These relate to lacking sufficient skills (Alvarez & Barney, 2014), lacking financial capital (Bradley et al., 2012) and being constrained by the normative environment (Mair, Martí, et al., 2012). While mostly members of low-income communities become entrepreneurs out of necessity (Dencker et al., 2019; McMullen et al., 2008), some develop an innovation. These grassroots innovators operate with limited resources (Linna, 2013) yet develop an innovation without outside help (Gupta, 2016). Addressing the barriers to becoming an entrepreneur, the interest is in understanding how organizations

are working to support grassroots innovators in becoming entrepreneurs in the context of poverty.

This study looks at three organizations that form the Honeybee Network based in India. Firstly, there is the Society for Research and Initiatives for Sustainable Technologies and Institutions (Sristi), which works mainly to seek individuals who have developed something new and unique. Once an innovation was identified, it was documented and added to the database for grassroots innovations. Secondly, there is the Gujarat Grassroots Augmentation Network (GIAN), which was established to serve as an incubator to further develop the innovations identified. Lastly, there is the National Innovation Foundation (NIF), which operates on the country level and supports grassroots innovators by organizing biennial award ceremonies, applying for patents and assisting in internationalizing. The data used in this study consists of archival data, such as multimedia data, reports and case studies and of six interviews conducted with representatives of these organizations.

The findings show that the organizations perform mundane work in providing hands-on support to the innovators, but they do also intermediation work to link the innovators with other relevant societal actors. The mundane work is aimed at strengthening the skills of the innovators. This includes issues related to the innovation, the enterprise and finances. Additionally, it also includes levelling with the innovator, referring to staying with the entrepreneurs, translating documents into the language of the entrepreneurs and providing mental support as well as convincing of the need of issues such as taxation and accounting. The intermediation work the organizations do is meant to link the innovators to societal actors who would otherwise not interact with innovators from informal, low-income backgrounds. This they do by publicly recognizing the innovators through awards and making the innovators visible through publicly talking about them and for example, portraying their innovations in Bollywood movies. While doing the mundane and intermediation work, the organizations also constructed an alternative narrative of the innovators, which positioned them away from the poor-innovating but within the more general innovation discourse.

The contribution of the study is in the approach to supporting innovative low-income innovators and entrepreneurs as an underexplored group. The focus lies on recognizing the work done and building from that, whereas literature has considered entrepreneurship in this context as driven by necessity (McMullen, Bagby, & Palich, 2008) or starting with the interference of an external organization (Mair & Marti, 2009). This study shows that the mundane activities, together with intermediation activities, create new opportunities for grassroots innovators. This has not previously been articulated in the literature. Furthermore, the study shows the link between the mundane work done privately and the intermediation work completed by reaching out to societal actors in supporting low-income entrepreneurs.

4.3 Paper 3: Entrepreneurial Innovation Processes: Refining the network dimension of Effectuation Theory

It is well known that grand challenges such as climate change, global resource scarcity and inequality impose a challenge for life as we know it. Many of these challenges are more severe in emerging economies, which have less resources to mitigate and adapt to the changes. To solve the many grand challenges we are currently faced with, innovations are important. When innovating, the assumption is that organizations know the environment for which they develop an innovation, in terms of social, economic and political factors (Seelos & Mair, 2017). However, in the realm of tackling grand challenges, cross-border innovation processes are increasingly addressing issues in a locality, which is contextually different from the origin of the entrepreneurial firm. However, these entrepreneurial endeavors frequently fail, and the innovations initiated in developed countries but aimed at low-income markets of emerging economies face difficulties in gaining terrain (Seelos & Mair, 2017).

Effectuation theory is a logic of the entrepreneur dealing with uncertainty and complexity (Sarasvathy, 2008). The opposite of the effectual logic is the causal logic. This is the rational logic based on competition, which starts with the artefact, for which a certain market exists (Sarasvathy, 2008). Effectuation theory is a process starting from the available means, leading to possible actions, meeting people and, eventually, gaining commitments from stakeholders which lead to cycles of new means and new goals (Dew et al., 2008). In this study, the focus lies with the stakeholder interactions and the development of the effectual network. At the start of the entrepreneurial venture, entrepreneurs have contacts to people whom they know, but these develop over time and experience (Kerr & Coviello, 2019). However, there is little empirical research on interactions, negotiations and commitments from stakeholders, which this study aims to reveal.

The study is conducted by exploring four cases from Northern Europe and the US. Firstly, Embrace works in the area of infant mortality and has developed a baby warmer for premature babies. Secondly, Clean Inc. works with access to clean water and has developed an application of a water filter based on nanotechnology to purify drinking water. Thirdly, Fuzu tackles the issue of unemployment and skill deficit in relation to rapid urbanization and has developed an online platform for jobseekers to find jobs and additional trainings to increase employability. Lastly, GoSol as a branch of Solar Fire Concentration Oy, deals with energy poverty and has developed a solar-fueled oven which also provides entrepreneurial opportunities. The data comes from multiple sources, including interviews, informal interactions, news articles and reports. The analysis is based on an abductive logic (Shepherd & Sutcliffe, 2011), which started from effectuation theory and networks and moved between the data and the theory.

The findings show that entrepreneurs operating in two distinct localities develop networks in both their home environment and the local environment with the market and the customers. Interestingly, the entrepreneurs develop connections with both individuals and organizations in their home

environment. In the local environment they rely mostly on organizational contacts, which help to build personal relationships with individuals. Further, the study shows that the network contacts have different purposes and that the ties are different in nature.

The contribution of the study lies in applying effectuation theory to the context of cross-border innovation and entrepreneurship processes; effectuation theory has been typically considered as a local theory and only recently been applied to processes of internationalization (Sarasvathy et al., 2014). However, this study is particularly interesting, as it considers firms entering the emerging economy context significantly different to the home environment and the uncertainties related to it. Further, the study conceptualizes the impact-driven born-global firm as operating in two distinct realities since the genesis of the enterprise.

5. Conclusion

This dissertation contributes to various scholarly discussions, but it also speaks to practitioners. The overall research question was understanding how entrepreneurship can contribute to poverty alleviation. This was explored through three questions central in the area of poverty and entrepreneurship: the scaling (paper 1) and support (paper 2) of low-income entrepreneurs and the operation across different geographies to develop and market life-changing innovation (paper 3). The existing literature lacked a comprehensive understanding of the micro perspective of the entrepreneur and how entrepreneurship aims to alleviate poverty and solve problems related to poverty and the lacking infrastructure. The study takes place mostly in India. Despite being considered a Middle Income Country, a relatively large portion of the country is living in conditions of extreme poverty. These pockets of poverty can be found in countries and regions with a high level of inequality, such as China and Eastern-Europe. Hence, the findings can be transferred to environments with similar contextual features as described in this study.

5.1 Theoretical contributions

Choosing low-income entrepreneurs and poverty as a context puts emphasis on a group with limited presence in academic discourses (Bruton et al., 2013; Calás et al., 2009). While the majority of the entrepreneurship literature focuses on the “Silicon Valley model of entrepreneurship” aiming for high growth (Welter et al., 2017), this dissertation contributes by showing the variety of types of entrepreneurs in the low-income sphere (paper 1 & 3), entrepreneurial activities in those environments (paper 1 & 3) and the support for those activities (paper 2). Further, instead of acting merely as universal recipients of development-oriented practices and reinforcing power asymmetries (Calás et al., 2009), this dissertation aims to give agency to the actors in this environment, including the grassroots entrepreneurs, the local support organizations and the impact-driven firm. Hence, this doctoral dissertation contributes to the scholarly discussion on low-income entrepreneurship and entrepreneuring for poverty alleviation but also to entrepreneurship theories more generally. I will detail the contributions to these streams of literature below.

5.1.1 The innovative low-income entrepreneur

As opposed to necessity-driven entrepreneurs (McMullen et al., 2008) who sell miscellaneous goods (Webb et al., 2013) and explore opportunities created by others (Scott et al., 2012), this dissertation looked at entrepreneurs who become entrepreneurs to commercialize an innovation they have developed themselves. This contributes to the emerging literature on poor people as innovative and creative problem-solvers (Prabhu & Jain, 2015; Sarkar, 2018; Shepherd et al., 2017) and contradicts with the assumptions typically associated to low-income entrepreneurs. These are that they are driven by necessity (McMullen et al., 2008), selling products produced by others (Scott et al., 2012) or innovations which can easily be copied (Shepherd et al., 2017). The entrepreneurs explored in this study can be categorized as grassroots entrepreneurs, who are individuals who develop, commercialize and scale an innovation they have developed themselves (Wierenga, 2020). As a contrast to previous literature that portrays low-income entrepreneurs driven by necessity, in this research I show that entrepreneurs can also be driven by innovation in the context of poverty.

The innovativeness of the low-income entrepreneur has several meanings. I show that these entrepreneurs tend to innovate to find solutions to problems they experience in their everyday life. These innovations are different to the innovations typically studied in the innovation literature, as these are innovations stemming from the resource-scarce context. The grassroots entrepreneurs studied in this dissertation start from a problem identified in their close environment to which they develop an innovative solution (Wierenga, 2020). As these innovations solve an existing and community-wide problem, market demand tends to exist for the innovation, given that the entrepreneurs get the appropriate support for refining and further developing the innovation. This resonates with the idea of superior ideas and novelty-related innovations (Bradley et al., 2012). These two features together mean that grassroots entrepreneurs can have an impact on their community, not only through providing employment opportunities when their firm grows, but also through the impact the innovation itself has on improving the wellbeing of community members. Wellbeing of community members has not been articulated clearly in the entrepreneurship literature related to poverty, and hence this is a novel observation. This dissertation provides this additional dimension to the current discourse on low-income entrepreneurship (Sutter et al., 2019).

This dissertation also contributes to entrepreneurship theories by showing different ways of coping with resource scarcity. Firstly, the study provides an additional perspective on entrepreneurial bricolage. While previous studies have identified that entrepreneurs in low-income settings use a bricolage approach (Linna, 2013; Sarkar, 2018), this dissertation continues by identifying grassroots bricolage as the type of behaviour of low-income entrepreneurs while scaling in the context of resource scarcity. Entrepreneurial bricolage refers to the means at hand, combining those in new and unforeseen ways and not feeling restricted by conventional limitations (T. Baker & Nelson, 2005). Grassroots bricolage involves using tangible and intangible resources as the means at hand

in new ways (Wierenga, 2020). Tangible means are the locally available resources, and intangible means refer to the network and the resources provided by the network. Tangible means have been identified in previous literature as being used by resource-constrained entrepreneurs (Linna, 2013), but my research contributes by showing that also intangible means can be a focus of bricolage. In particular, this dissertation shows that also intangible resources can be used in unforeseen and new ways. These are the award and the patent, which the entrepreneurs mostly used in an unforeseen way as an acknowledgement of the work done and as legitimating their entrepreneurial activities.

5.1.2 Innovativeness of impact-driven firms

In addition to the low-income entrepreneurs, this dissertation also explored young firms established by teams from developed countries but innovating for the low-income markets in emerging economies. Solving challenges in the global south poses an opportunity for innovative solutions from diverse players, such as large multinational firms (Halme et al., 2012) and NGOs (Mair & Marti, 2009). While international entrepreneurship has challenges for any firm, impact-driven firms have an additional level of challenges, as they sell products or services aimed at the poorer half of the population and operate in an environment significantly different to their usual home environment.

This dissertation shows that the lack of geographical proximity with actors in the target market is the major challenge, which firms cope with through different mechanisms. While embeddedness has been explored through the physical presence in the market (Jack & Anderson, 2002), this study adds by highlighting the different mechanisms of gaining local presence and, consequently, the different degrees of geographical proximity to the market. In distant proximity, the firm operates from its home environment but with local partners, who are typically local NGOs. In moderate proximity with the target environment, the decision-making of the firms is largely in its home environment. However, these firms have physical representation in the target environment through local employees and frequent visits to the end users and other partners. Direct proximity means having a locally embedded firm with local operations and decision-making based in the target country. The study further shows that, of these different degrees of proximity, the direct proximity is the most advantageous for speedy acceptance on the market.

5.1.3 Support on an institutional level

Even though the experience of the grassroots entrepreneur can be that they worked hard and alone, this dissertation demonstrated the role and importance of support to low-income entrepreneurs. While the focus has been on entrepreneurship trainings as the interference of an external organization (Mair & Marti, 2009), this study looked at organizations supporting individuals who had already developed an innovation. This means that the starting point for providing entrepreneurial support and guidance is different, given that an

innovation exists around which an enterprise can be established. Supportive organizations can help individuals who want to become an entrepreneur in commercializing their novel innovation (Bradley et al., 2012) as opposed to providing support for entrepreneurs driven by necessity (Dencker et al., 2019). Similarly, where the market institutions are missing, entrepreneurs can be helped by facilitating the emergence of such institutions (Mair & Marti, 2009). The approach to supporting low-income innovators and entrepreneurs as demonstrated in this study is different from a practice of training individuals with little consideration for the market needs or existing sets of skills, which is frequently used by NGOs.

More specifically, this dissertation contributes by highlighting that when seeing entrepreneurship as a solution to poverty, support for the low-income entrepreneur is necessary simultaneously on several levels. On the individual level, the low-income entrepreneur needs practical help that is accessible and available. This leads to a broader view of the entrepreneurs on their own capabilities and possibilities and, hence, empowers them to become entrepreneurs. On the organizational level, the support relates to the innovation, the business development and other entrepreneurship-related issues, such as accounting and taxation. Lastly, the entrepreneurs suffer from the institutional boundaries that restrain the low-income entrepreneur and limit the resources available to them. Although poverty is not always visible, as a poor person may have clean clothes, smell fresh and appear happy, it shows in the limited social capital, human capital and financial capital. These hidden root causes of poverty create the main challenges for low-income entrepreneurs, and my dissertation shows that, to fight these root causes, support for the low-income entrepreneur is necessary on several levels simultaneously.

The grand narrative of social entrepreneurs highlights the heroic sole entrepreneur who develops an entrepreneurial solution which also creates economic value. However, with this study, I have offered a detailed account and shown that the reality is more complex (Dey & Steyart, 2010). Since the root causes for poverty appear on several levels simultaneously, the support is also necessary on multiple levels. Further, not considering inclusivity adequately might also lead to destructive, unintended consequences (Hall et al., 2012).

While growth does reproduce the economic system surrounding the entrepreneur (Calás et al., 2009), in this dissertation, it is seen more as an increase in income and hence as a sign of positive development impact. In addition, it also has a positive impact on an individual through increased self-confidence and on the societal level through job creation, serving as an example for other members in their communities. With Table 2, I demonstrate the work done on multiple levels to create the conditions under which entrepreneurship is a solution to poverty.

	What?	Why?
Individual level	Ability to innovate and willingness to take risks	Self-confidence to pursue an entrepreneurial path
Organizational level	Well-targeted support to the enterprise and innovation of the low-income entrepreneur	Realize potential for firm growth, leading to employment opportunities of others
Institutional level	Quality education, shelter, health care and nutrition since childhood	Less inequality in opportunities Favourable environment for entrepreneurship among the low-income population

Table 2 The factors on multiple layers contributing to entrepreneurship as a solution to poverty.

Despite aiming for a comprehensive understanding of the issue, the reality is more complex, as portrayed here. Issues such as criminality, corruption and other negative unintended consequences of entrepreneurship (Hall et al., 2012) are not sufficiently considered in this dissertation. Further, in itself, this view of the importance to operate on multiple levels simultaneously does not provide much new information as it does show in studies in the field of development economics (Banerjee & Duflo, 2012). However, entrepreneurship literature has tends to forget this when focusing on entrepreneurship as a solution to poverty (Bruton et al., 2013; Sutter et al., 2019). With this, I call for more studies that take a broad yet critical stance on entrepreneurship in the context of poverty.

5.1.4 Is entrepreneurship a solution to poverty?

Looking at entrepreneurship as a solution to poverty, this dissertation aims to understand how entrepreneurship can contribute to poverty alleviation. As a response to this research question, the research highlights important factors contributing to growth of the firms and, consequently, their poverty-alleviating potential. Firstly, on the individual level, the factor is the innovativeness of the entrepreneur (Wierenga, 2020) and a novel innovation with market potential (Bradley et al., 2012). Secondly, the organizational level factor means sufficient support available to help develop the idea (paper 2). Thirdly, the factor on the institutional level relates to initiatives in making entrepreneurship of low-income entrepreneurs more favourable. Addressing these multiplicity of factors simultaneously is important, as idealising the poverty alleviating potential of entrepreneurship emphasises short-term actions, such as microcredit, instead of focusing on the failing institutions as the root cause of the problem (Karnani, 2009).

Continuing from these observations, the poverty-alleviating potential of low-income entrepreneurs comes from firm growth, leading to job creation. These employment opportunities are valuable, especially for those who are neither able nor willing to take the risks related to entrepreneurship. It is important to

acknowledge that there is a group of extremely poor for whom the entrepreneurship journey is too difficult and too risky, as they lack sufficient skills and support for becoming an entrepreneur. While entrepreneurship ideally serves as a source of income, it also carries risk and therefore additional stress, which not everyone is equipped to carry. For this group, the job creation potential of the enterprises established by their peers provides a more stable route out of poverty, as they are less financially invested in the venture.

This dissertation also looked at innovations developed in a developed country but aimed at the low-income population in emerging economies. Despite the challenges, this shows that impactful innovations sometimes must come from abroad. In this context, entrepreneurship and innovation aim to improve the quality of life of those living under conditions of poverty. These issues include access to clean drinking water, access to energy and reduced infant mortality. Even though these firms aim to have a positive development impact on the life of those living under constraints, it does not serve as a direct method for poverty alleviation.

Figure 4 The three conditions under which entrepreneurship is a solution to poverty.

Based on this dissertation research, entrepreneurship can be an effective solution to poverty, but depending on the type of entrepreneurship. The imitative, small-scale activities of necessity-motivated entrepreneurs with low profit margins serve as highly unstable and fluctuating income (McMullen et al., 2008). However, under certain conditions, entrepreneurship can serve as a solution to poverty. The conditions are that the entrepreneur has an innovative idea, receives well-targeted support and operates in an environment which enables entrepreneurship. Uniting these three conditions, as shown in Figure 4, is the main contribution of this dissertation.

For other scholars and practitioners working with low-income communities, poverty alleviation and entrepreneurship, this dissertation offers a way of seeing poor people in a more diversified way than the imitation-based, necessity-motivated image common in the literature. Framing low-income entrepreneurship as necessity motivated serves as a reinforcement of the stereotypes associated with people living in poverty (Calás et al., 2009). These

are, for instance, informality linked with criminality, poor quality and unreliability. However, this study shows another perspective on low-income entrepreneurship for considering the agency and innovativeness of low-income entrepreneurs. Innovation-driven entrepreneurship does serve as a tool for poverty reduction (Wierenga, 2020), when appropriately supported (paper 2), not only for the entrepreneurs but also for their communities through job creation.

5.2 Implications for practise

Based on this research, it is possible to provide implications for organizations in the field of poverty alleviation, for funders and for policymakers. Organizations working to alleviate poverty can reach many potential entrepreneurs at once by organizing entrepreneurship trainings. However, this model might also lead to producing an overconcentration of a certain profession. Therefore, it is important to acknowledge the ingenuity of local communities and build on the existing ideas and prototypes of innovations developed by the members of the community. The impact asked for by donors is often measured in numbers, and more trained people appears to have a better impact. However, the research of this dissertation encourages organizations to go beyond the numbers and consider the individual needs of people with entrepreneurial aspirations. Further, the research also shows that the entrepreneurial journey is filled with challenges and hence is not suitable for every poor person.

When it comes to the support, organizations working in the sphere of poverty alleviation tend to develop support that is not always perceived as helpful. Therefore, this research calls for a tailored approach in working with low-income entrepreneurs. While this consultant-like approach, described in paper 2, is surely more costly than a general approach, the premise is that the outcome is more impactful when tailoring the approach to the needs of each entrepreneur and their innovations.

A further policy implication is awareness of the complexity of issues. This means that, when designing policies, policymakers should avoid quick fixes and instead design policies that tackle the root causes of the problems. For example, instead of setting up a simple microfinance scheme, it is advisable to include business-idea screening to avoid the temptation of working towards quantity over quality. Further, it is important to build an environment that facilitates entrepreneurship of low-income entrepreneurs and hence allows the extreme poor to be employed in the firms of their peers instead of entering the difficult path of entrepreneurship.

This dissertation has suggestions also for firms that have developed an innovation, which has the potential to solve problems in a developing country and improve the quality of life of the people there. Firstly, instead of focusing on the solution, it is important to understand the problem fully. This requires sufficient time for research and an iterative approach to innovation. Secondly, the research also highlights the importance of relocating to the target market or

aiming for local embeddedness through another creative solution, such as collaborating locally or employing employees locally.

5.3 Future research

Within the field of entrepreneurship and innovation for poverty alleviation in resource-scarce contexts, many questions remain unanswered. For example, while this study focused on male entrepreneurs, the role of women is important and should not be forgotten in academic research or policy making. Women often play a dual role of both earning income for the household and caring for the extended family. Hence, I urge scholars to explore the unique challenges faced by women in the context of poverty, innovation and entrepreneurship. Understanding development from a female perspective will help to make development inclusive for everyone.

Further, while the majority of the existing research is conducted from the perspective of organizations, understanding the perspective of individual actors is also important. While other scholars have also called for a micro perspective in addition to the macro perspective (Bruton et al., 2013), the interesting questions arise from the impact the institutional conditions have on the individual.

As development aid funding has not lead to the desired outcome of the eradication of poverty (Moyo, 2009), future research must dive deeper into alternative or new forms of development-linked funding. For example, impact investment is an interesting and emerging category in a sector which is typically considered conservative. Further, it is also important to refine our understanding of impact from the perspective of local communities instead of funders' needs.

In this work, the focus was, on the one hand, on enterprises from a developing country context expanding within that context, and on the other hand on firms from developed countries aiming at the low-income markets in emerging economies. However, it is also interesting to consider firms from a developing country entering a developed country. This has been studied in the case of a textile industry firm from Ghana entering the market in the US (Kujala & Törnroos, 2018), but scholars could continue exploring the institutional and contextual factors affecting such firms.

There is also room for more critical studies in the field of entrepreneurship (Calás et al., 2009). For example, it is interesting to study enterprises of low-income entrepreneurs that have failed. Despite these cases being difficult to find and gain access to, they can provide new insights to the ongoing discussion. For example, what happens to low-income entrepreneurs without access to additional resources to scale their entrepreneurial venture? Is the assumption correct that they will find a way, but that it will require more time? While it is obvious that failure has financial consequences for the individual, what are the other consequences in terms of stigma within the community? How do these affect the entrepreneur? What can be learned about entrepreneurship as a solution to poverty from these cases? And overall, what are the negative

consequences of entrepreneurship among the poor on the individual and the community?

5.4 Limitations of the study

While this dissertation aims to explore and understand the phenomenon of poverty and entrepreneurship, it also has some limitations. Firstly, most of the collected data comes from cases studied in India, which poses challenges on the field work. For example, I could not interact directly with the entrepreneurs interviewed because of the lack of a common language. Another limitation comes from the lack of a shared cultural understanding between me, as the researcher, and the studied entrepreneurs. I was well aware of these limitations and tried to minimize their impact by working with a local research assistant, as describe above (chapter 3.3). However, it might be beneficial to consider an iterative approach to interviewing or using an ethnographic method in which one spends more time in the community. The limitation of that is, of course, that it allows less width in the study because of each case's time consumption.

Secondly, the research includes a limited number of cases, and some may argue that more cases would have been beneficial for the research. While grassroots entrepreneurship is not a marginal phenomenon, this could have been demonstrated stronger with more cases. Further, the interviews were about events that happened in the past, which might be disturbed because of recollection bias. This was minimized by also including other sources of data in the study.

Thirdly, the generalizability is limited to analytical generalizability of similar cases in similar contexts of poverty. As mentioned, these are not only limited to emerging economies but can also be Middle Income Countries with people living in conditions of poverty. Similarly, the findings can be applied to other impact-driven start-ups.

5.5 Concluding reflections

Considering that most of the data and cases come from a different socio-cultural environment than my regular environment, I have tried to transparently explain the research process. Furthermore, coming from a social constructivist tradition, the study does not claim to be objective. For these reasons, I want to finish with some reflections and thoughts on the process. Firstly, I want to reflect on the role of the researchers in relation to the research participants. I often wondered what the influence on the study was in that the researcher is an educated woman conducting field research in a society where women do not have a visible role outside their home. This can lead to power asymmetries on several dimensions, considering the foreignness and the gender of the researcher in relation to the research participant. It is difficult to know how it influenced the interview responses or how it was perceived by the research participants on a more foundational level. Can it help to improve the position of women in such an environment?

Secondly, the theories applied to the phenomenon of low-income entrepreneurship are mainly theories developed by Western scholars and based on research conducted in the context of developed countries. Coming from this angle, it is fair to ask if what we, as Western researchers, consider interesting is considered normal by the research participants living in the studied reality. This is a question fundamental to research conducted in any organizational context, but considering the nature of the research, it is worth pausing on this issue for a while. Is this type of research unintentionally contributing to a normative construction of the ideal way of being in the world? Is it proposing one way as being better compared to the other? Having a culturally diverse researcher team conducting the field research and analysing the data would be a way to mitigate the appearance of a normative approach.

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