

Investigation of the Stockholm entrepreneurial ecosystem's response to the influx of refugees

Abstract

This study will explore the notion of ecosystems as complex systems that adapt in response to a dynamic and increasingly networked world by investigating how the Stockholm entrepreneurial ecosystem has responded to the current influx of refugees. The concept of entrepreneurial ecosystems has become a buzzword in recent years with various groups in society encouraged to participate in the ecosystem. One such group within the social fabric which has grown rapidly is refugees. The involvement of refugees in the entrepreneurial ecosystem has not been previously studied and therefore constitutes a theoretical gap, which is addressed by the research question: *How has the Stockholm entrepreneurial ecosystem responded to the current influx of refugees?* A qualitative method was utilised, including ten interviewees who were either experts in their fields or had first-hand knowledge of the challenges faced by refugees. It was found that the current influx of refugees has caused the Migration Office to deal with an unpredictable number of applications, which has led to prolonged processing times. In addition, the refugees' housing arrangements, which are under governmental jurisdiction, are considered too far away from the city centre. The ripple effects of the refugees' dormancy period and geographic isolation are felt in integration efforts. Attempts have been made to address refugee issues through different entrepreneurial initiatives, such as hackathons, mentorship and network-building platforms, education programs and traineeships with companies, which allow refugees to create professional links. Technology start-ups in particular are early-adopters of refugee integration projects. Moreover, the lack of identified response mechanisms in financial services represents a gap in services for refugees. The practical implications are the need for better coordination mechanisms among these actors and for the perception of refugees to be focussed primarily on their status as entrepreneurs or workers. Greater investment in Human Capital, not only in terms of raising the skill level and Swedish language ability of refugees but also in terms of redesigning recruitment metrics and broadening Culture mind-sets, may also be called for. Another practical implication on a Policy level could be a rethinking of minimum wages and regulations for low-skilled jobs.

Key words: refugees, immigrants, entrepreneurial ecosystem, DPSIR

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1. Introduction

The Introduction chapter consists of four sections. Section 1.1 provides the background on entrepreneurial ecosystems and the entrepreneurial activity of immigrants. The purpose and research question is presented in 1.2 while the delimitations are described in Section 1.3. The thesis is outlined in Section 1.4.

1.1 Background

Recently, the concept of entrepreneurial ecosystems has captured the imagination of entrepreneurial leaders and policymakers alike. According to Isenberg (2010; 2011), an entrepreneurial ecosystem is “a set of networked institutions (...) with the objective of aiding the entrepreneur to go through all the stages of the process of new venture development. It can be understood as a service network, where the entrepreneur is the focus of action and the measure of success.” There are two logics as to how to create an entrepreneurial ecosystem (Regalado, 2013): the governmental logic sees the need for specialised inputs, such as innovation centres to promote the emergence of the ecosystem. Stockholm for instance generates one third of the Sweden’s economic growth and ranks as one of the world’s foremost knowledge-based economies due to the region’s quality institutions for research and development, significant innovation climate and well-developed clusters of information and communication technologies as well as biotechnology (Braun & Diensberg, 2007; Regional Development Plan for the Stockholm Region, 2001).

The other logic on creating an entrepreneurial ecosystem is based entirely on the people and their personal networks (Regalado, 2013). After the mid-1970s, the proportion of refugees immigrating to Sweden has increased consistently and the total share of immigrants in the population exceeded seven percent (Aldén & Hammarstedt, 2014). The number of refugees has kept growing ever since, together with a second generation of immigrants (Andersson & Wadensjö, 2004). In 2015, Sweden received 163,000 asylum-seekers (Migrationsverket, 2016) and estimates to receive between 100,000 and 170,000 in 2016, thus making Sweden the country that accepts more refugees per capita than any other EU member (Jacobsen, 2015). However, due to the differences in human capital, such as native language skills and access to networks, and discrimination (Pripp, 2001), almost all foreign-born groups have a lower employment rate than natives (Ohlsson, Broomé & Bevelander, 2010). Raijman and Tienda (2003) refer to the *blocked mobility hypothesis* that states that “refugees and immigrants who anticipate or experience disadvantages in the employment market may choose self-employment.” Motivation to follow this path, conversely, is seen to be dependent on cultural aspects and ethnic entrepreneurial background (Hammarstedt, 2004).

1.2 Purpose of study and research question

The purpose of this study is to investigate the response of Stockholm’s entrepreneurial ecosystem to the influx of refugees, and will contribute to the knowledge of two streams of literature. The first addresses the nature of entrepreneurial ecosystems and second addresses the changing face of human capital within the ecosystem, resulting from immigration.

Firstly, regarding entrepreneurial ecosystems, the *ecosystem* part of the concept has largely been overlooked, with the biological interpretation of this concept taken figuratively (Stam,

2015). The approach currently consists of lists of factors but fails to illustrate the interdependencies between the factors, causal relationships or impacts on aggregate welfare (Stam, 2015). The filling of this gap will contribute to the scholarly rigour of the concept, which will be achieved by utilising established models for framing particular environmental problems to identify appropriate responses. This contribution will further distinguish the entrepreneurial ecosystem concept from that of entrepreneurial or innovation systems.

Secondly, there is a theoretical gap with regards to the identification of factors that obstruct the entrepreneurial endeavours of newly arrived refugees, primarily in Sweden. In previous studies, close attention has been given to *self-employment* among immigrants, a term usually used interchangeably with *entrepreneurship*. However, the gap to be filled will relate entrepreneurship in the sense of “high-growth start-ups” which are pivotal sources of innovation and employment (Mason & Brown, 2014; World Economic Forum, 2013) regarding the refugee subset of immigrants.

This study will explore the notion of ecosystems as complex systems that adapt in response to a dynamic and increasingly networked world by investigating how the Stockholm entrepreneurial ecosystem has responded to the current influx of refugees. The concept of entrepreneurial ecosystems in relation to refugees has not been studied and therefore constitutes the theoretical gaps we aim to address in relation to the research question below:

How has the Stockholm entrepreneurial ecosystem responded to the current influx of refugees?

Given the relative lack of studies relating refugees to the entrepreneurial ecosystem, a qualitative approach will be undertaken to understand the phenomenon and its relevance for the Stockholm entrepreneurial system.

1.3 Delimitations

As stated in the preceding section, the aim of the study is to explore the response of Stockholm’s entrepreneurial ecosystem to the current influx of refugees. As far as methodological considerations are concerned, the population of refugees who arrived before 2010 were excluded from the study as their arrival was deemed out of scope of the present refugee crisis. Although a discussion on self-employment follows in the review of literature, the pool of refugees under investigation will not include the self-employed as entrepreneurs. This is because the definition of entrepreneurship in the ecosystem view relates to the creation of high-growth start-ups rather than traditional statistical indicators of entrepreneurship such as self-employment (Mason & Brown, 2014; World Economic Forum, 2013).

1.4 Thesis outline

This thesis is divided into six chapters. The first chapter presented the background and the purpose of the thesis. Chapter 2 is a discussion of the literature along the two streams of research, entrepreneurial ecosystems and human capital of refugees. The third chapter describes the methodological approach utilised while the fourth chapter delves into the results

and analysis of the qualitative study. The thesis concludes with a summary in chapter 5 and a discussion of contributions, limitations of the research and future areas of study in chapter 6.

2. Literature Review

The literature review chapter is comprised of four parts. An overview of two streams of literature is provided with Section 2.1 outlining the nature of entrepreneurial ecosystems and section 2.2 presenting an overview of entrepreneurial activity of immigrants. The theoretical gap is summarised in Section 2.3 and a theoretical framework is synthesised in Section 2.4.

2.1 The nature of entrepreneurial ecosystems

An overview of the theoretical background will be presented through insights from two streams of relevant literature. The first stream of literature explains the nature of entrepreneurial ecosystems. Given the similarity to established concepts such as innovation systems and industrial clusters, it is useful to establish the merits and pitfalls of this concept which has garnered the attention of media and practitioners alike.

2.1.1 Defining entrepreneurial ecosystems

In order to define entrepreneurial ecosystems it is necessary to separate each of the terms *entrepreneurship* and *ecosystems*. Literature presents many definitions for what entrepreneurship is. The Schumpeterian view of entrepreneurship that emphasizes on innovation and the Kirznerian view that emphasizes opportunity alertness are routinely used to define and measure country level entrepreneurial activities (Öner & Kunday, 2015; Marcotte, 2014). Thus, a national innovation system can be considered a “historically grown subsystem of the national economy” (Balzat & Hanusch, 2004). The attention on regional innovation systems sought to shed light on smaller geographical areas (Cooke & Morgan, 1998) with parallels drawn from early studies of *industrial districts* and *industrial clusters* (Camagni & Capello, 1999; Feldman & Florida, 1994; Porter, 1990). Generally, the notion of *ecosystems* as complex, adaptive systems is useful in understanding society’s ability to build a consensus in response to an ever-changing and increasingly networked world (Innes & Booher, 1999). Such consensus building is crucial in order to adjust to dynamic situations which can change actors and their actions, thereby generating new linkages and ideas (Innes & Booher, 1999).

Nowadays, the terms *innovation ecosystem* and *entrepreneurial ecosystem* have emerged. While literature has not produced a typology of such ecosystems it is useful to define each in turn in order to compare with established writings on similar concepts. Innovation ecosystem definitions vary, from “economic agents and economic relations as well as the non-economic parts, such as technology, institutions, sociological interactions and the culture” (Mercan & Göktaş, 2011); to “creation of nets that provide mechanisms for goal-focused creation of new goods and services to rapidly evolving market needs, with multiple, autonomous and independent institutions and dispersed individuals for parallel innovation” (Durst & Poutanen, 2013). Many authors emphasise that an innovation ecosystem essentially relies on collaboration among disparate and independent actors forming a network-like structure (Rabelo & Bernus, 2015; Berasategi, Arana & Castellano, 2011; Camarinha-Matos & Afsarmanesh, 2007; Bernstein, 1998). Contrasting with regional innovation systems or clusters, the concept of innovation ecosystem thus (1) demonstrates a greater focus on the connectivity among numerous innovation actors; (2) identifies the vital role played by

information and communication technologies (ICT) in linking the innovation actors and (3) places more weight upon market forces compared to governmental or NGO influences (Oh, D.-S., et al, 2016). It is important to recognize the designed nature of an innovation ecosystem which Papaioannou, Wield and Chataway (2007) note as a difference with natural ecosystems given (i) the purposefulness of design and (ii) the inherent importance of governance within innovation ecosystems.

The *entrepreneurial ecosystem* concept similarly does not have a widely shared definition (Stam, 2015). Isenberg (2011; 2010) posits it as “a set of networked institutions (...) with the objective of aiding the entrepreneur to go through all the stages of the process of new venture development. It can be understood as a service network, where the entrepreneur is the focus of action and the measure of success.” This definition is more robust than the more widely applicable one of “the entrepreneurial ecosystem as a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship”. Entrepreneurship in the ecosystem view does not include self-employment and other traditional statistical indicators of entrepreneurship but rather “high-growth start-ups” which are pivotal sources of innovation and employment (Mason & Brown, 2014; World Economic Forum, 2013). The focus on the external environment is a commonality the entrepreneurial ecosystem has with innovation systems but the divergence comes in the focal point of the concept. In the case of the entrepreneurial ecosystem approach, it is centred on the entrepreneur as the leaders in the creation and sustenance of a healthy system (Stam, 2015).

The current body of work on entrepreneurial ecosystems is largely directed towards practitioners and not an academic audience which may contribute towards the limited causal depth and extent of evidence (Stam, 2015). Despite this leaning towards practitioners, the focus on the role of local settings and bottom-up processes is by and large in line with current academic work on regional innovation and growth (Cooke et al., 2011; Boschma & Martin, 2010).

2.1.2 The characteristics of Stockholm’s entrepreneurial ecosystem

There are two logics as to how to create an entrepreneurial ecosystem (Regalado, 2013): The governmental logic sees the need for specialised inputs, such as technology parks and innovation centres to promote the emergence of such an ecosystem. Stockholm generates one third of the Sweden’s economic growth and ranks as one of the world’s foremost knowledge-based economies due to the region’s high quality institutions for research and development, supportive innovation climate and well-developed clusters of information and communication technologies as well as biotechnology (Braun & Diensberg, 2007; Regional Development Plan for the Stockholm Region, 2001). Figure 1 below lists examples of the various actors in Stockholm’s entrepreneurial ecosystem.

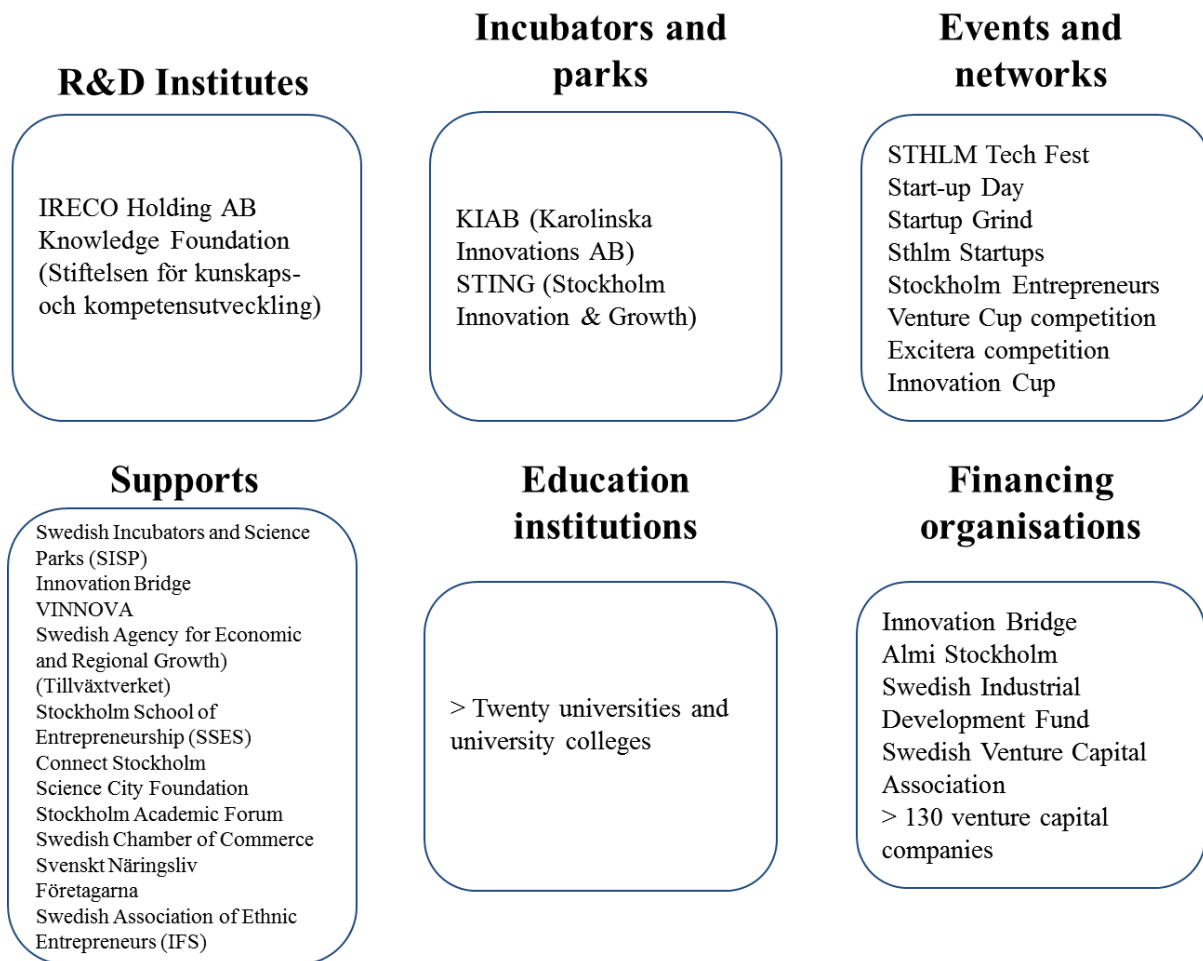


Figure 1: Actors in Stockholm's entrepreneurial ecosystem (Source: Compiled by the authors from Braun & Diensberg, 2007; Invest Stockholm website)

Many research and development institutes and a major centre for private initiatives are present in Stockholm and the institutes work closely with Swedish companies on R&D projects, besides facilitating and fostering start-ups. There are also several science parks, business incubators and start houses around Stockholm which strive to stimulate the growth of new companies and can be seen as the link between entrepreneurs and the commercial market (SISP, 2006). In addition, support organizations impact entrepreneurial activities in the region either directly or indirectly while industry associations can be considered important actors in facilitating the innovative environment (Braun & Diensberg, 2007). Business Plan competitions also take place in Stockholm, encouraging entrepreneurs to develop their ideas. For foreign-born entrepreneurs, the Swedish Association of Ethnic Entrepreneurs (IFS) plays an important role supporting immigrant entrepreneurial businesses in Sweden (Renou, Rehn & Xu, 2007).

As a foundation of entrepreneurial activity it is important to consider laws and regulations to the establishment of businesses in the country. On one hand, the simplicity of the procedure to establish a business is such that it takes a few weeks due to the standardised contracts and documents. On the other hand Swedish small-business tax rules may be complicated, owing to the inability to convert labour income to the lower-taxed capital income (Braunerhjelm &

Henrekson, 2013). Regarding financing in general, there are also several organisations that provide capital to start-ups, seed financing and venture capital. The number of business angels in Sweden is increasing – several networks organized among them already exist (Braun & Diensberg, 2007). Banks and the aforementioned incubators, cluster organizations and industry associations are also actors in the funding of the entrepreneurial ecosystem (Ingram & Teigland, 2013).

The other logic on creating an entrepreneurial ecosystem is based entirely on the people and their personal networks (Regalado, 2013). With regards to the quality of human capital, Stockholm County has more than twenty universities and university colleges; five of those have established holding companies according to a government proposition which entitled them to commercialise research in project and service companies. These holding companies are linked to technology transfer offices, incubators and entrepreneurship centres (Braun & Diensberg, 2007). As compared with other countries, Sweden is placed third on university-industry collaboration (World Economic Forum, in ISA report 2008/09). With regards to entrepreneurial ambition, a large proportion of the population claims to have the ability to identify business opportunities according to a report about Entrepreneurship in Sweden (Braunerhjelm & Henrekson, 2013). However, perceptions of ability to start and run a business are low as a result Stockholm – and Sweden – is ranked low in entrepreneurship indexes (Global Entrepreneurship Monitor, 2004). The country has the lowest number of start-ups in Europe, while at the same time the oldest business owners (Företagarna, 2011).

2.2 The role of immigrants in the entrepreneurial ecosystem

We now turn to the second stream of literature which addresses the changing face of human capital within the ecosystem resulting from immigration. By further distinguishing asylum seekers and refugees, a group which has grown at an unprecedented scale in recent years, their impact can be specifically determined.

2.2.1 Immigration and the changing employment landscape

Immigration to Sweden has increased steadily since the post-war years. In the 1950s, around one percent of the total population of the country was of foreign descent. Almost exclusively from the Nordic countries and Southern Europe, the immigrants came primarily as labour (Aldén & Hammarstedt, 2014). However, the lower rate of economic growth and subsequent unemployment that took place in the country in the early 1970s reduced the demand for foreign labour and the migration policy became stricter (Castles & Miller, 2003). After the mid-1970s, the proportion of refugees immigrating to Sweden had increased consistently and the total share of immigrants in the population was more than seven percent (Aldén & Hammarstedt, 2014). The number of refugees has kept growing ever since, together with a second generation of immigrants (Andersson & Wadensjö, 2004). In 2015, Sweden received 163,000 asylum-seekers (Migrationsverket, 2016) and estimates to receive between 100,000 and 170,000 in 2016, making Sweden the country that accepts more refugees per capita than any other EU member (Jacobsen, 2015).

This reality has impacted the employment rates in the country. Due to the lower employment integration of immigrants who arrived in the 1970s, there was a consistent decrease in the employment rate of the group since the 1990s (Bevelander, 2000). Nowadays, when analysing the employment integration by country of birth, it is possible to see that almost all foreign-born groups – and mostly newly arrived groups of refugees – have a lower employment rate than natives (Ohlsson, Broomé & Bevelander, 2010). This situation has been attributed to differences in human capital, such as native language skills, access to networks, structural economic change and discrimination (Pripp, 2001). Specifically in Sweden, those differences have been described by several studies. Discrimination in the labour market is given as one of the main causes for immigrant self-employment (Hammarstedt, 2001; Andersson, 2006; Habib, 1999; Khosravi, 1999; Najib, 1994), the so-called disadvantage hypothesis (Moore, 1983). Together with poor Swedish language skills, difficulty to transfer qualifications from their home country and racial discrimination, these factors hinder the entry of immigrants in the wage employment market (Ohlsson, Broomé & Bevelander, 2010; Le Grand and Szulkin 2000; Arai, Regner & Schröder 1999) and prevent 47% of the refugees who arrived before 2005 to find a job in the subsequent ten years they have lived in the country (Billner & Rolander, 2015). Furthermore, the social capital factor is important to explain immigrants' issues to find work (Putnam 2000; Putnam, Leonardi & Nanetti 1992), since they tend to have weaker destination-country-specific social capital, and lack the capabilities of integrating networks or larger social relationships as resources (Portes, 1995).

Due to those aspects and the previously mentioned historical factors that have driven immigrants to find alternative solutions to the usual wage employment market, it would be likely that immigrant self-employment would have become a marginal phenomenon in Sweden; instead, it has developed as an increasing source of employment that allows the assimilation of immigrants within the Swedish society (Hammarstedt, 2004). The motivation to follow this path, however, is seen to be highly dependent on cultural aspects and ethnic entrepreneurial background (Hammarstedt, 2004), since immigrants whose home countries have strong self-employment traditions tend to have a higher likelihood of becoming self-employed in Sweden (Andersson and Hammarstedt, 2007; Hammarstedt, 2004). Some ethnic minority cultures consider self-employment more valuable than other groups (Najib, 1999).

2.2.2 Entrepreneurial activity of immigrants

In Silicon Valley much attention has been directed towards the significant contributions that immigrant entrepreneurs have made in the technology and engineering sectors (Wadwha, Saxenian, Rissing & Gereff, 2007; Saxenian, 2000; Saxenian, 1999). In order to attract immigrant entrepreneurs many nations in the developed world have established specific visas and entry requirements for them (Schuetze & Antecol, 2007). For example, preferential admission is given to those immigrants entering the US who invest \$1 million in businesses in addition generating or maintaining at least ten full-time jobs for US workers, and the Start-up Act 2.0 bill proposes increasing the opportunities for immigrants to start businesses in the US (US Department of Homeland Security, 2012).

When exploring the subject of entrepreneurship among immigrants, *entrepreneurship* is interchangeable with *self-employment* and there are two branches of studies that have been predominant in the literature. The first one focuses on the characteristics that drive immigrants to choose to become self-employed – the supply side. According to these theorists, immigrants tend to engage in self-employment more often than natives due to difficulties found when trying to join the wage employment market (Bailey & Waldinger, 1991; Light, 1984). Other researchers affirm that the growing number of self-employment rates in the group is a result of the establishment of a community of entrepreneurial elite that holds capital and abilities and the loyal attitude of succeeding immigrant waves of same ethnicity that offer cheap labour (Bonacich, 1993). Some groups have particular traits that drive them to that type of employment, such as managerial skills (Lucas, 1978), less risk aversion (Kihlstrom & Laffont, 1979) and less binding wealth and liquidity constraints (Lindh & Ohlsson, 1996; Evans & Jovanovic 1989). Research also suggests that some immigrant groups have high rates of self-employment because their home countries have high rates of self-employment (Yuengert, 1995; Light, 1972). Another suggested that the motive is that they are better able to avoid taxes by becoming self-employed (Yuengert, 1995).

The second branch of studies approaches the market for self-employed immigrants within certain countries – the demand side. Some studies affirm that the concentration of immigrants in small geographic areas generate a demand for ethnically defined businesses that are better developed by people of same ethnicity (Fairlie & Meyer, 1996; Light, 1984; Wilson & Portes, 1980); the so-called “ethnic markets” (Ram et al. 2000), which consist of specific products that are somehow linked to their region of origin. Similarly, openings for immigrant entrepreneurs may occur through vacancy-chain mechanisms, according to which business vanish and are replaced by newcomers from abroad (Rath 2000; Waldinger 1996). However, general supply and demand effects exist in any given society and overpower specific interaction effects between supply and demand (Light, 1972); which means that the market for self-employment is highly dependent on the countries’ institutional factors. The mixed embeddedness model suggests that many aspects meet at this intersection in order to drive immigrant entrepreneurship (Kloosterman & Rath, 2001), such as: the embeddedness of their activities with respect to customers, workers, suppliers, competitors, and business associations; their relationship with the welfare system, the regulatory framework and policies; and the social networks the entrepreneur is surrounded by (Kloosterman, van der Leun & Rath, 1999). Studies have shown, for instance that one reason that likely contributes to the eagerness of immigrants to join the self-employment market is the high minimum wage; which pushed the supply of people with low education and low skills – group in which immigrants are overrepresented – to be larger than the demand and consequently stimulates the self-employment (Andersson & Wadensjö, 2004).

Given the Swedish socio-economic environment, explaining the overrepresentation of immigrants in the self-employment sector (Hammarstedt, 2001) is more complex than it seems, since the group faces strong barriers to entrepreneurship activities. A possible reason for the increasing rate of immigrants in the sector is the structural change of the economy that took place during the 1990s, with a reduction of the industrial sector and increase on the

service sector, which implied the need of more communication-intense working processes, and therefore demanded of employees Swedish proficiency, language skills and the understanding of different patterns of behaviour in the Swedish business setting (Lundh & Ohlsson, 2007; Bevelander, 2000; Scott, 1999; Lundh & Ohlsson, 1994).

Studies have also shown that the decision to become self-employed can be based on the neo-classical human capital theory, according to which the predicted earnings difference – when compared to unemployment and wage employment – motivate the decision (Miao, 2015; Clark & Drinkwater, 2000; Gøsta Esping-Andersen, 1999; Borjas, 1986). Although researchers have found that income of self-employed immigrants is lower than those of immigrants who are employees, the opposite is true for natives (Bager, 2002). Furthermore, studies show that the experience of unemployment also influences the propensity to become self-employed, but unemployed immigrants more often become self-employed than natives (Dohlmann, 2001). Self-employed immigrants are frequently constrained by capital and face discrimination in the financial market (Miao, 2015). Even in an economic upturn, Middle Eastern and non-European immigrants have to deal with this discrimination, facing higher bank loan deny rates and interest rates than natives (Aldén & Hammarstedt, 2014) – the same is not necessarily true to European immigrants (Hammarstedt, 2004). At the same time, different studies show that the share of immigrants who choose to become self-employed is high among immigrants from China, India, Pakistan and Iran (Razaei, 2002).

2.2.3 Prevalence of entrepreneurial refugees

First, it is important to define the term *refugees* in this work, since different typologies have been presented throughout the literature. Sometimes they are based on cause of migration movements and migrants' motives, and refugees are considered as involuntary, forced migrants that have moved due to political factors (Peterson, 1970). The definition of refugees as involuntary migrants carries the connotation that their movements are mechanical reactions to political forces, conflicts, violence or war (Böcker & Havinga, 1997). Another typology, of reactive migration, distinguishes the notions of proactive and reactive migration; according to this conceptualisation, refugees are considered reactive migrants (Richmond, 1993). In this sense, when someone moves in anticipation of factors that would force them out of his/her home country, the person is considered a proactive migrant, therefore not a refugee; other theory would distinguish anticipatory and acute refugee movements (Kunz, 1981). Refugees would be those who move in response to “push” factors, which drive them out of their home countries; while voluntary migrants move in response to “pull” factors, which attract them to a new country.

A typology can also be based on the legal sense, in which refugees are those who have filed a formal request of asylum (Böcker & Havinga, 1997). However, it does not clearly distinguish immigrants who had to flee their home countries due to critical situations from people who have applied as asylum seekers solely due to the tightening of immigration controls; and fails to consider refugees who have moved but not acquired the legal status of asylum seeker (Böcker & Havinga, 1997). Furthermore, a separation of political from economic or social causes is also deceptive, since migration movements can be the result of diversified causes

(Suhrke 1995; Menjivar 1993). Having explored different types of typology, it was decided to define asylum-seekers and refugees according to the Swedish Migration Board's definitions. Thus, "an asylum seeker is a person who makes their way to Sweden and applies for protection (asylum) here, but whose application is not yet decided" while "a person is classed a refugee when they have well-founded reasons to fear persecution due to race, nationality, religious or political beliefs, gender, sexual orientation, affiliation to a particular social group (Migrationsverket, 2016).

Independent of the typology used to define refugees; some important differences between refugees and immigrants that influence their attitude towards entrepreneurship must be highlighted: (1) the social network of refugees is usually less extensive, since they have fled their countries on an individual basis (Gold, 1992); (2) it is frequently not possible for refugees to return to their countries in order to acquire funds, capital or labour for new businesses (Wauters & Lambrecht, 2008); (3) traumatic events that refugees have experienced may cause psychological problems that hinder their drive to become entrepreneurs (Bernard, 1977; Hauff & Vaglum, 1993); (4) refugees usually have not prepared themselves for their stay in their new countries (Gold, 1988); (5) refugees frequently had to leave valuable things behind, such as financial capital and certificates of education (Wauters & Lambrecht, 2008); (6) many refugees are not suited to wage employment due to their legal situation or to their lack of skills and qualifications (Gold, 1988). As previously discussed, most immigrant groups in Sweden have lower employment levels than natives, in particular newly arrived groups of refugees. The general pattern is that natives have the highest employment rate, followed by Europeans and then non-Europeans. Research also shows that this hierarchy persists for the second generation of refugees (Lundh et al., 2002).

2.3 Theoretical gap

The discussion of the theoretical background from the two streams of literature, namely that of entrepreneurial ecosystems and the changing face of human capital within the ecosystem resulting from immigration, illustrates two theoretical gaps which our paper aims to address. Firstly, regarding entrepreneurial ecosystems, the *ecosystem* part of the concept has largely been overlooked with the biological interpretation of this concept taken figuratively within the context of entrepreneurial ecosystems (Stam, 2015). The approach currently consists of lists of factors but illustrates neither the interdependencies between the factors, causal relationships nor impacts on aggregate welfare (Stam, 2015). Frenkel and Maital's introduction to their 2014 book *Mapping National Innovation Ecosystems* considers biological ecosystems only as a loose metaphor and despite the book's title, neither the ecosystem term nor the metaphor appears anywhere else in the volume (Oh, D.-S., et al, 2016). The filling of this gap will contribute to the scholarly rigour of the concept, which will be achieved by utilising established models for framing particular environmental problems to identify appropriate responses. This contribution will further distinguish the entrepreneurial ecosystem concept from that of entrepreneurial or innovation systems.

Secondly, there is a theoretical gap with regards to the identification of factors that obstruct the entrepreneurial activities of the newly arrived refugees, primarily in Sweden. Close

attention has been given to self-employment among immigrants, a term used interchangeably with entrepreneurship. Some studies have explored the accessibility of resources for the group when starting and running their own businesses; and others studied the structural limitations of these businesses by blocked mobility and discrimination. Although studies approach such aspects consistently, the gap to be filled will relate entrepreneurship in the sense of “high-growth start-ups” which are pivotal sources of innovation and employment (Mason & Brown, 2014; World Economic Forum, 2013) with respect to the refugee subset of immigrants.

This study will explore the notion of ecosystems as complex systems that adapt in response to a dynamic and increasingly networked world by investigating how the Stockholm entrepreneurial ecosystem has responded to the current influx of refugees. The concept of entrepreneurial ecosystems in relation to refugees has not been studied and therefore constitutes the theoretical gap we aim to address in relation to the research question below:

How has the Stockholm entrepreneurial ecosystem responded to the current influx of refugees?

2.4 Theoretical Framework

Given the myriad of definitions of entrepreneurial ecosystems so, too are the frameworks used to study them. The Aspen Network of Development Entrepreneurs (2013) summarised the research that has been conducted and identified several studies developing an entrepreneurship ecosystem assessment framework. Some of the models list an extensive list of indicators (OECD: 57 indicators, Asset mapping roadmap: 157 indicators), while others are more conceptual and allow more flexibility in assessing entrepreneurial ecosystems.

The theoretical framework utilised in this paper will be that of The Babson Entrepreneurship Ecosystem Project developed by Isenberg (2010) who initially identified 13 elements of an entrepreneurship ecosystem (leadership, government, culture, success stories, human capital, financial capital, entrepreneurship organisation, education, infrastructure, economic clusters, networks, support services and early customers) that all must exist in order for an entrepreneurship ecosystem to be self-sustaining. We will use Isenberg (2011) version which further summarises these into 6 elements namely Policy, Supports, Human Capital, Culture, Markets and Finance as seen in Figure 2 below. Policy refers to the regulatory environment and the governmental support towards entrepreneurial leadership. Finance denotes the financial services in the ecosystem while Supports look at other supporting professions in addition to non-governmental bodies and physical infrastructure. Culture refers to the norms within society as well as the visibility of successful instances of entrepreneurship. Markets examine networks of both entrepreneurs and early customers. Human Capital surveys the skill-set of the labour force and the quality of academic institutions.

Domains of the Entrepreneurship Ecosystem

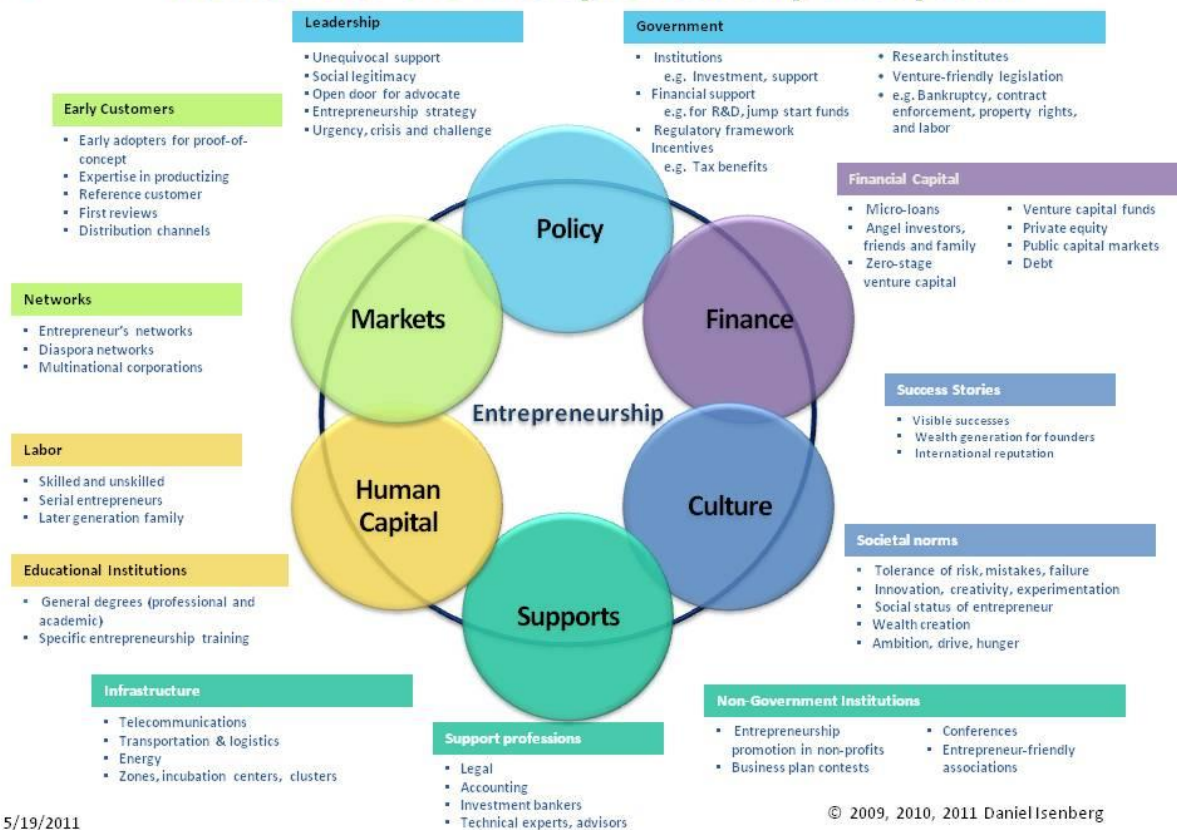


Figure 2: Domains of entrepreneurship. (Source: The Babson Entrepreneurship Ecosystem Project)

In order to further address the *ecosystem* in 'entrepreneurial ecosystem' we will utilise concepts from biological ecosystems. The Driver-Pressure-State-Impact Response (DPSIR) framework for integrated environmental reporting and assessment was developed by the European Environmental Agency (EEA) in 1999 and has been widely adopted in the study of environmental problems. DPSIR is currently used as a means of outlining particular environmental problems to identify appropriate responses. Drivers refer to fundamental social processes which shape human activities that have a direct on the environment, for example for a nation a driving force could be the need to keep unemployment levels low. Pressures are both the specific human activities and natural processes that result from driving forces which impact the environment, for example the use of resources. State is the condition of the environment, that is, the current trends in its various environmental compartments. Impacts are the ways in which changes in state influence human well-being. Responses generally refer to institutional efforts to address changes in state, as prioritized by impacts (Carr et al., 2007). Figure 3 below illustrates the framework, with the direction of arrows indicating the flow of causes and effects for a given environmental problem.

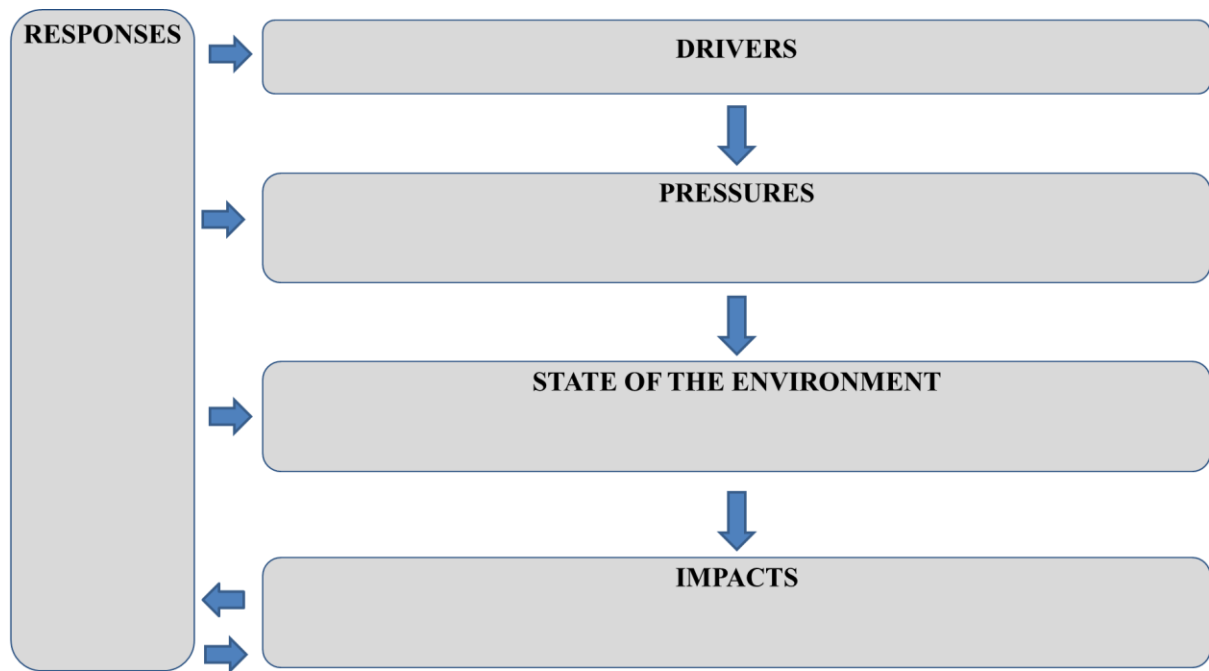


Figure 3: DPSIR Framework. Source: EEA

We deem the use of this framework appropriate in early stage research of entrepreneurial ecosystems because of the framework's purpose of categorising and disseminating information related to environmental challenges, in our study's case, that of large scale human migration. Thus, combining the two frameworks results in the model below (Figure 4) in which the domains of the entrepreneurial ecosystem are investigated thereby identifying appropriate indicators for the response of the change in the ecosystem.

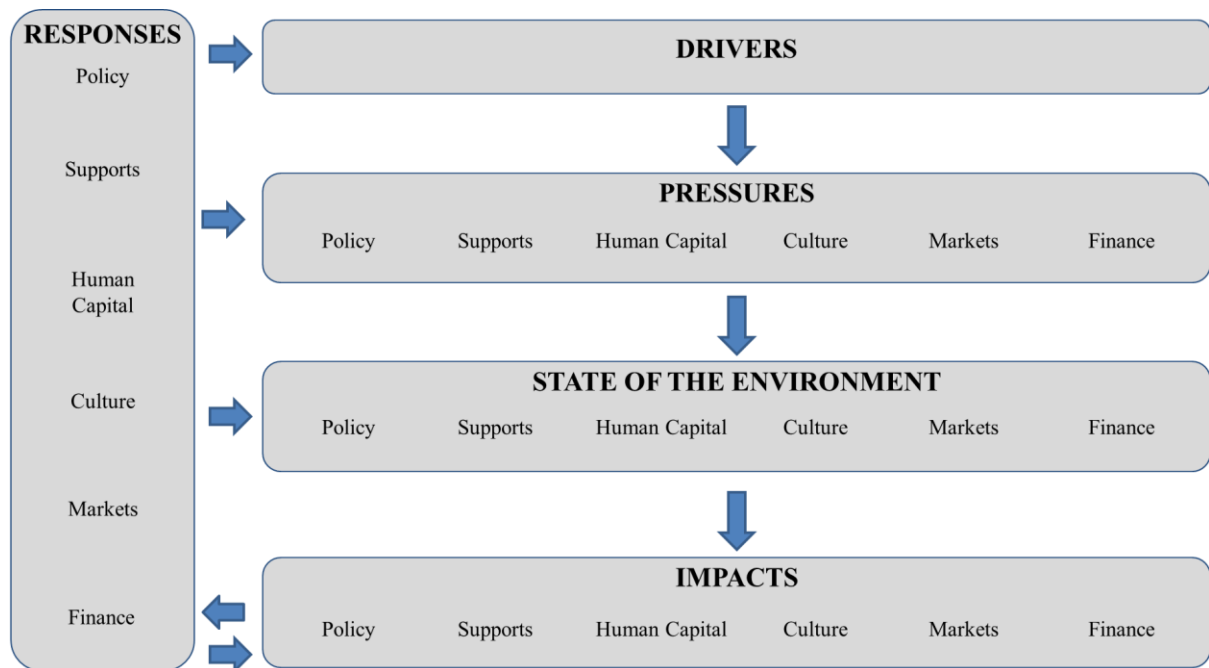


Figure 4: Summary of theoretical framework

3. Methodology

This chapter introduces the research design in section 3.1, describes the data collection in 3.2, elaborates on the quality of the study in 3.3 and concludes with analysis in 3.4.

3.1 Research design

As discussed in the literature review, the concept of regional innovation systems bears resemblance to the entrepreneurial ecosystem approach. Thus, in the design of the study alternatives were considered among the established RIS methodologies which are either comparative empirical studies of different regions or in-depth studies of single RISs. In addition, region selection is based on the type namely peripheral, metropolitan and industrial (Tödtling & Trippel, 2005; Isaksen, 2001). The main entrepreneurial hubs in Sweden are located in the metropolitan cities of Gothenburg and Stockholm and would have been ideal to conduct a comparative study. However, since the co-authors are based in the Stockholm area and are more knowledgeable of the actors in the system it was deemed appropriate to do an in-depth study of the Stockholm region. For this reason peripheral and industrial regions were also problematic.

Thus, this study's theoretical and empirical aim is to investigate the response of Stockholm's entrepreneurial ecosystem to the current influx of refugees and a qualitative research design was chosen. The main reason is the exploratory nature of the topic. Qualitative approaches are useful, given the relative lack of studies on refugee entrepreneurship and the goal is therefore to describe the phenomenon with respect to its relevance for the Stockholm entrepreneurial system.

3.2 Data collection

In qualitative studies, data is usually based on 1-30 participants (Fridlund & Hildingh, 2000). We categorised our participants in three groups; those who had arrived as refugees, those who develop programs targeting refugees and those who provide support to entrepreneurs in general. Three instruments were designed for this study. A semi-structured questionnaire with opened-ended questions was developed for each of the categories. The questions generally focused around goals, initial and current barriers and challenges, resources and kinds of assistance needed and available, successes and employment history. Other questions sought information on the respective agency's goals, needs and barriers for refugees, skills and strengths of refugees, programs currently offered or not offered and innovations in refugee societal integration (Appendix).

Based on our informational needs as well as access we conducted in-person interviews with three participants who arrived as refugees, three who develop programs for refugees and three who provide support for entrepreneurs. One participant in the 'develops programs targeting refugees' category was corresponded with electronically. The numbers of interviewees is suitable because the participants can be considered experts in their fields or have first-hand experience of the challenges facing refugees. The participants of the study are described in Table 1 below. Interviews were conducted either in quiet surrounding at participants' offices, Stockholm School of Entrepreneurship or at a public library, depending on the preference of

and convenience for the participant. The interviews for refugee participants lasted in total of approximately 3.5hrs while the others ranged from 30-70 minutes. The interviews were audiotaped and transcribed.

Table 1: Description of interview participants

Category	Description
Arrived as refugees	1: Employed in the IT sector and arrived within the last six months 2: Employed by a multinational corporation and arrived within the last two years 3: Entrepreneur in the IT sector and arrived within the last six years
Develop programs targeting refugees	4: Provides a mentoring platform for refugees 5: Develops hackathons for addressing refugee issues 6: Offers academic programs for refugees 7: Involved in social integration programs at a business organisation network
Provide support for entrepreneurs	8: Involved in migration and integration programs at a think-tank 9: Involved in recruitment at a business incubator 10: Involved in managing a business incubator

3.3 Data analysis

Downe-Wambolt (1992) defines content analysis as “a research method that provides a systematic and objective means to make valid inferences from verbal, visual, or written data in order to describe and quantify specific phenomena” (p.314). There are two types of content analysis: manifest and latent analysis. Manifest analysis is the description of the participants’ words, that which is visible in the text while latent analysis is the interpretation of meaning of the text (Berg, 2001; Downe-Wambolt, 1992; Catanzaro, 1988). The method selected for this study was manifest analysis, thus the participants own words are often used to maintain the original meaning as will be seen in the following chapter on Analysis and Results. This option was deemed the most suitable given the exploratory nature of the study and the relatively low body of research on entrepreneurial ecosystems with respect to refugees.

Analysis began with codes derived from the combined theoretical frameworks of Isenberg (2011) and DPSIR which were then compared against the actual data, revising and discarding as put forward by Miles and Huberman (1994). This deductive procedure of generating coding lists from literature ensures greater ease of obtaining high reliability with the codes (Catanzaro, 1988). Independently the researchers identified, classified, and sorted meaning units related to their preliminary themes and subsequently negotiated confluent and diverging issues, in so doing widening the analytical space. Validity is also increased by conducting the analysis separately before building consensus which is one form of triangulation (Burnard, 1991, Graneheim & Lundman, 2004).

3.3 Quality of the study

A measure to portray the quality of a qualitative study is to aim for trustworthiness and credibility (Reese et al., 1999). According to Reese et al. (1999) interviews are a subject to misinterpretation either because interviewees are reluctant to reveal information or an interviewer interjects their own perspective. In order to mitigate misinterpretations in this regard, the use open-ended questions as well as maintenance of neutrality and clarity in the interview was adhered to (Goodman, 2001). Moreover, ethical considerations of anonymity, confidentiality and informed consent were also addressed with the interviewees. The semi-structured approach enabled participants to direct the interview and raise topics that were relevant given their personal experiences. To further avoid a high degree of personal bias, both of the authors were present during all the interviews.

This study utilised a non-probability convenience sample in the city of Stockholm, and, therefore, the findings are not generalizable to other refugee groups, for example, in other parts of Sweden. In addition, the persecution experienced by some refugees often results in caution and mistrust of outsiders, limiting their inclination to share their stories. Nevertheless, this information is important for future research with this population.

4. Results and Analysis

This chapter contains six sections. Each of the domains of the entrepreneurial ecosystem will be discussed within the DPSIR framework beginning with Policy in section 4.1. This is followed by Supports in 4.2 and Culture in section 4.3. Thereafter, Human Capital and Markets are presented in 4.4 and 4.5 respectively. The chapter concludes with Finance in section 4.6.

4.1 Policy

4.1.1 Driver

The primary driving force underlying the change in the ecosystem is the increased migration to Sweden. From the perspective of the interviewed refugees the impetus to leave their home countries can be viewed not only in terms of being forced out of their countries because of persecution and other various reasons but also because of the perceived advantages Sweden has to offer. The first was perceived lower language barriers and the prospects of permanent residency as a springboard to further opportunities as illustrated by the interview quote:

I wanted to come to Sweden for the permanent residency and at the same time I wanted to gain enough experience then go out. Combine permanent residency, work experience and also the population is quite fluent in English then you can save time learning the language and those are the reasons why I picked Sweden (2, arrived within the last two years).

Secondly was the openness of Swedish society: “I like Swedish society, that’s the society that treats people as an individual person, not because of his background” (1, arrived within the last six months). Thus, Sweden is a migration destination for refugees owing to the factors that are perceived to ensure smooth integration into the society. Germany is a popular destination among highly skilled refugees as evidenced by the quote:

I think that the talented refugees go to Germany. I say that because most of my colleagues from the university I see that eighty percent of them are in Germany. In Sweden there is a percentage of talented people, doctors...engineers among the refugees but not the majority (1, arrived within the last six months).

In the discussion of proceeding entrepreneurial ecosystem domains this driver will be taken as the sole force and thus the sections will begin with the pressures that this driver presents on the particular ecosystem domain.

4.1.2 Pressures

Integrating asylum-seekers and refugees into Swedish society is administratively challenging and puts pressure on processing systems. The systems were not designed to process the high volume of applications currently experienced: “The thing is that the system was designed in 2004-2008, to actually solve 100 cases per week or something. Then you get 100,000 cases” (5, develops hackathons addressing refugee issues)

The assimilation of the new arrivals also puts pressure on housing arrangements. When refugees arrive in Sweden they are first placed in refugee camps. Integration is further complicated by their physical isolation from Swedish society since the refugee centres are located far from the centre of the city:

The problem the refugees face in general is why are they 75km from the nearest city? They make it harder for all the refugees to know more about the society. I ask friends in Germany, I ask friends in Netherlands, in other countries and all their houses are inside the cities so they have connections, they have networks (1, arrived within the last six months).

4.1.3 State of the environment

The pressure exerted on processing systems has had an unintended effect on waiting time. The road to a residency card involves navigating three interviews at the Migration Office. It is only after the second interview that the LMA card, which functions as both identification and work authorisation, is given. The waiting time between each of the stages has increased exponentially: “The current waiting time for the first interview is like 4 months. When I arrived it was 3 days” (2, arrived within the last two years).

4.1.4 Impact

The negative effect of the prolonged waiting time is both psychological and professional. Firstly, the uncertainty over a period of eighteen months or longer, depending if you have all your documentation, is detrimental to their mental well-being as described by the quote:

This year and a half consider it as a bear hibernate phase. Although I was doing part-time job bear in mind, I wasn’t just sitting around, still it was probably one of the most mind-dumbing, boring areas of my life (2, arrived within the last two years).

Secondly, the uncertainty of the wait has an impact on how prepared the refugees are to enter the ecosystem as job-seekers or entrepreneurs:

I think in one of the focus discussions we had it was mentioned like if I actually knew I was going to wait for a year, I could program my free time probably. I could build a network on my free time or something (5, develops hackathons addressing refugee issues).

Lastly, given the lengthy processing time, refugees who find employment within a few months of arriving in Sweden are effectively operating outside the law:

I have been here for 6 months and I didn’t get even an interview with Migration Office to tell them my case. I think among 400 people that are sitting in my camp, I think I’m the only one employed (1, arrived within the last six months).

The refugees’ housing arrangements also impact their ability to establish roots in the community since having a home in Sweden is related to employment prospects:

They (experts in a workshop) actually linked employment with housing. So actually, getting a house is something that gets you established in Sweden. The fact that you don’t have a home, that you don’t have your own place, doesn’t lead you to actually start your life again because you don’t have something that make you feel like you are home in Sweden (5, develops hackathons addressing refugee issues).

4.1.5 Responses

The primary driving force underlying the change in the ecosystem is the increased migration to Sweden which puts pressure on processing systems and housing arrangements, thereby having an unintended effect on waiting time. One response mechanism introduced a few years prior to the current refugee crisis enabled refugees to switch immigration tracks if offered employment such that they were not “stuck in that system” (8, involved in migration

and integration programs at a think-tank). However, refugees are unaccustomed to the regulations as well as with the government bodies responsible which hinders the effectiveness of the response mechanism of the immigration track change:

I can switch right now. I'm not sure if I can get a work permit because I'm working, or not. But still, in my case, the Migration... I have to wait until it's finished and then I can apply, I can change (1, arrived within the last six months).

Adapting the ecosystem to the psychological and professional side-effects of the prolonged waiting time as well as to housing arrangements requires the influence of lobby groups as evidenced by the interview quote:

The vision that we have is that we are creating an ecosystem here in which you actually identify bottlenecks in integration systems. That can be a lobby group that can give the recommendations in policies that we implement, even on legislations (5, develops hackathons addressing refugee issues).

By lobbying for policies that view the new arrivals as entrepreneurs first and refugees second, the barriers faced by all entrepreneurs in the ecosystem are lowered:

We propose to make the systems in general easier and not specific solutions just because you're foreign-born. It will benefit every entrepreneur but it will benefit (foreign-born entrepreneurs) more because of the extra difficulties with the language skills and so on (8, involved in migration and integration programs at a think-tank).

Policymakers also need to adopt a flexible approach in order to adapt the ecosystem. It is challenging to develop systems that do not require rigid conformity as expressed by the interview quote:

It's a huge challenge not to become a system that everyone needs to go in this direction and this is what we've done before which has been a problem in Sweden. I think Swedish politicians sometimes they sort of have...everyone to become self-employed or entrepreneurs and what we were discussing was that you shouldn't push anyone who doesn't want to be an entrepreneur or doesn't want to be self-employed if they don't want to. We know that a lot of people do start their own companies as an alternative to unemployment and that's good of course because we don't want high unemployment but it could be more difficult for you to run your company if that's not what you want to do (8, involved in migration and integration programs at a think-tank).

In conclusion, the results and analysis are summarised Figure 5 below.

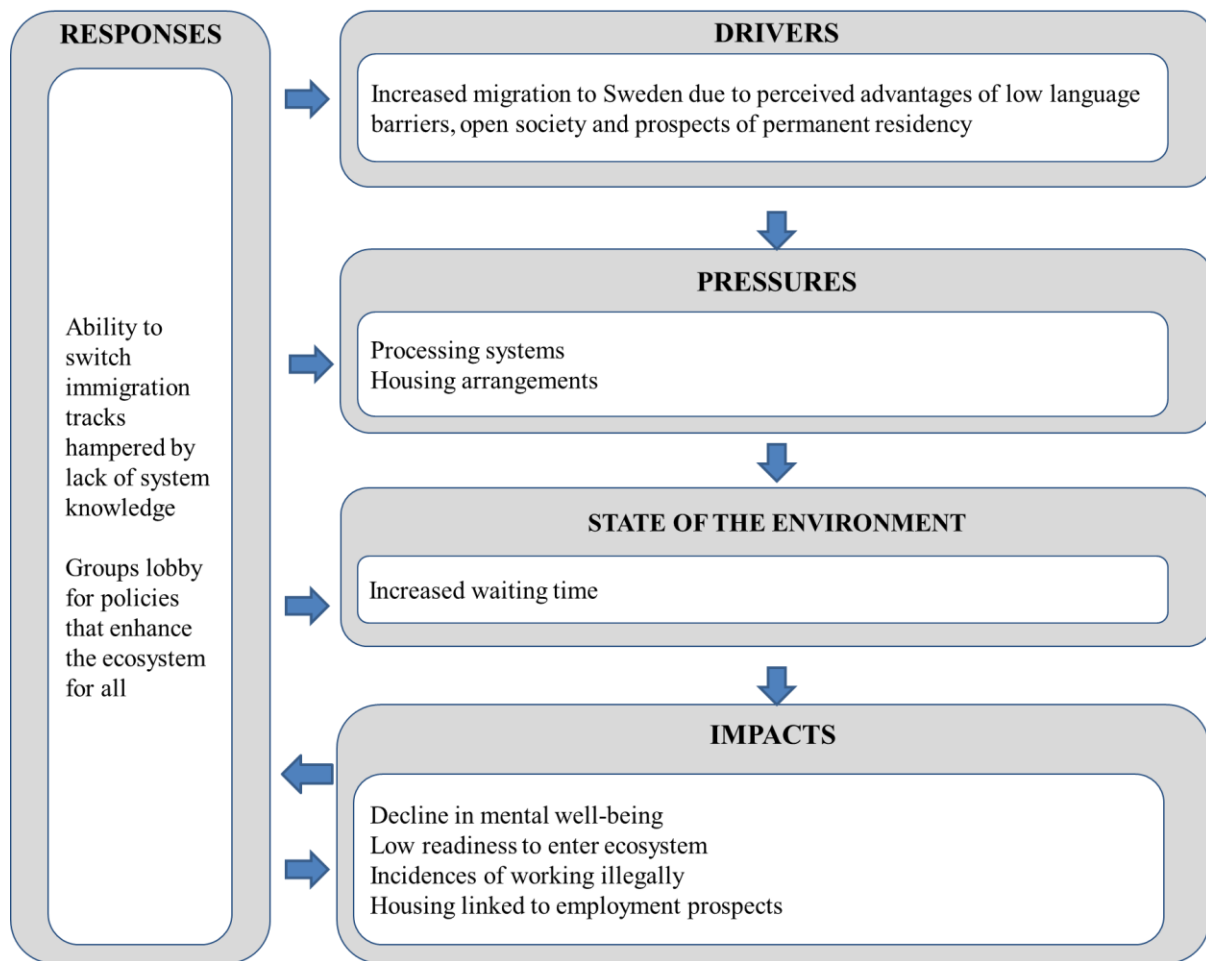


Figure 5: Summary illustrating DPSIR findings in the Policy entrepreneurship domain

4.2 Supports

4.2.1 Pressure

Integrating asylum-seekers and refugees into Swedish society puts pressure on infrastructure including housing. As described in the preceding section on Policy, the government decides upon the housing arrangements of refugees in the centres. The location of refugee centres has bearing on the extent of employment and entrepreneurial opportunities available as explained by the interview quote:

There's a large percentage (of refugees) that can't really choose placement in the municipality and then there's certain areas in Sweden that are more or less prone to be entrepreneurial than others. In some areas they don't have a lot of companies and a lot of refugees now are in smaller municipalities around the country where the labour market situation is very difficult and also may be difficult to start a company. So, of course it matters if you live in Stockholm or if you live in Gothenburg or in Malmö or in a smaller village or city (8, involved in migration and integration programs at a think-tank).

4.2.2 State of the environment

The pressure exerted on housing has had an unintended effect on the transportation needs of the refugees. Since the refugee centres are located outside the city, the refugees have encumbered access to the Stockholm entrepreneurial ecosystem:

I interact with refugees day in and day out and the biggest problem we face is transport because the places where they stay are outside Stockholm and the problem is all the initiatives that we take for the refugee talents happen in the heart of the city (9, recruits at a business incubator).

While the refugees receive a monthly allowance of about 700 kronor the amount is insufficient upon consideration of the need of transportation as evidenced by the quote:

If you are going to plan to come to Stockholm from Uppsala which is the nearest city to Stockholm I think you have to use half of your salary on transportation and you cannot buy food or something so that is the biggest challenge (1, arrived within the last six months).

4.2.3 Impacts

The adverse effect of the need for transportation stemming from the distance of the refugees' accommodation is both social and professional. The ability to share tacit knowledge is facilitated by geographic vicinity (Gertler, 2003) and entrepreneurial ecosystems have formal and informal liaison-animators (Sweeney, 1987) whose role is to share this tacit knowledge. As illustrated by the interview quote it is problematic to convey such knowledge to refugees without face-to-face encounters:

We Skype all the time and sometimes they don't have effective internet to do a Skype conversation, so we have to change to a telephone conversation, and imagine me sitting here trying to explain how things work in Sweden over a telephone call. It is difficult because it is a completely different world (9, recruits at a business incubator).

4.2.4 Responses

The migration driving force puts pressure on housing, thereby having an unintended effect on tacit knowledge sharing arising from the geographic separation of refugees in the entrepreneurial ecosystem. One response mechanism has been the increase in hackathons:

Start-up Weekend is a group that is part of Google for Entrepreneurs and Start-up Weekend organises weekend hackathons. A hackathon is any challenge that you solve over the weekend in a consecutive stretch. There are sales hackathons, there are business hackathons, growth hackathons. So, they are going to create a new hackathon in this area to brainstorm ideas how to solve to the refugee current integration (9, recruits at a business incubator).

Thus, with the purpose of addressing the refugee crisis the diverse actors within the ecosystem are unified:

The hackathon was four working days of totally different talents. In those four days you actually get four ideas, the making of only one of those ideas in one single organisation would take way longer. So, the whole process is actually a bootstrapping mechanism, where at each step you are bootstrapping the resources you have for the activity (5, develops hackathons addressing refugee issues).

Secondly, the hackathons facilitate the integration of refugees into the ecosystem as they participate in the framing of entrepreneurial solutions given their experiences of the daily issues of living in the refugee centres:

I went twice for hackathons implementing new ideas about service solution, IT solution. Most of the camps are far away from the centre of the city so my idea for the hackathon was to do a video conference (1, arrived within the last six months).

Events in which refugees meet with local entrepreneurs are beneficial as they enable cultural and professional links to be formed which will be discussed further in the following sections on Culture, Human Capital and Markets. The refugees, in so doing, are better equipped to understand the ecosystem as job-seekers or entrepreneurs as evidenced by the quote:

In these recruitment mingles we identify twenty companies that are looking for a special set of skilled people, and try to identify 100 people who match those skill areas (...). We have built these bad stereotypes so the more refugee talents meet them, the more they are in areas where we see them, then it is easy to integrate (9, recruits at a business incubator).

Conferences enable entrepreneurial refugees to further integrate into the ecosystem by allowing them to test out their ideas amongst other entrepreneurs more knowledgeable of the workings of Stockholm's ecosystem as illustrated by the quote:

I have an idea and there is a conference with the Europe developers who want to start their business together or start their own business and I'm going to introduce my idea. The idea with the most votes or has a lot of people who support this idea, they are going to support you with everything (1, arrived within the last six months).

In conclusion, the results and analysis are summarised Figure 6 below.

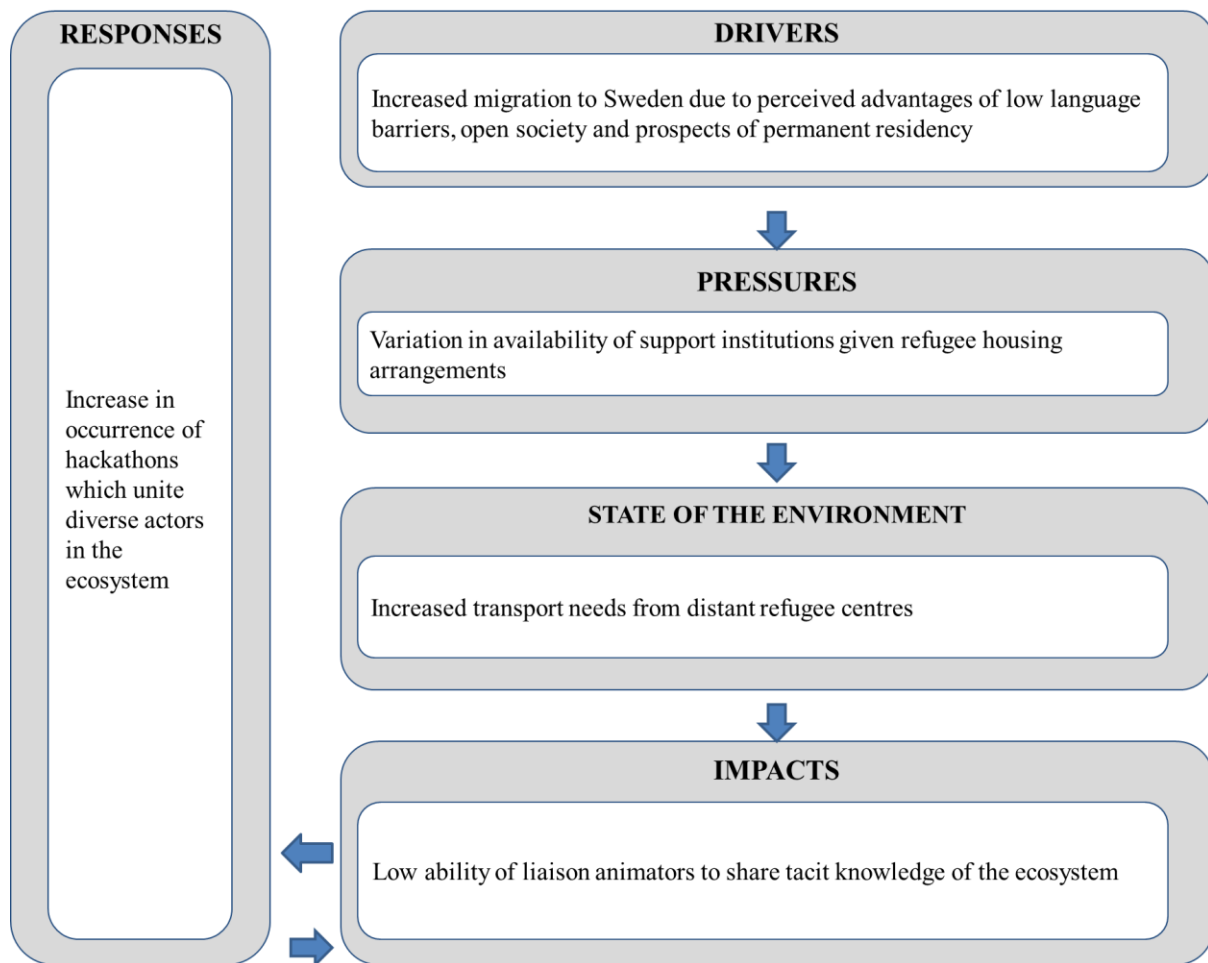


Figure 6: Summary illustrating DPSIR findings in the Supports entrepreneurship domain

4.3 Culture

4.3.1 Pressure

The influx of asylum-seekers and refugees into Swedish society puts pressure on the capacity to integrate various societal norms into the ecosystem. As discussed in Policy and Supports, the physical isolation of refugees has far-reaching effects on their ability to experience and understand Swedish social and professional culture as illustrated by the quote:

I was there in the camp but here it's different. There are no lectures to tell the people how is the society, how to behave. The society has its own rules and traditions and you have to know this (1, arrived within the last six months).

As discussed in the literature review, some immigrant groups have high rates of self-employment because their home countries have high rates of self-employment (Yuengert, 1995; Light, 1972). The motivation of refugees to engage in entrepreneurial activities upon arriving in Sweden is also dependent upon their experiences of the ecosystems of their home countries:

When I came here I noticed that every guy starts his own business. To start a business in our country is not that easy as here in Stockholm. A lot of people fear to start business so most of them go to find a job. If I go to a camp right now today and have 200 people in front of me

and ask them who has a business idea. No one will tell me 'I have a business idea' because we don't have this methodology of thinking. But once you get to know this country and how easy it is to do... So right now I'm thinking of starting my own business (1, arrived within the last six months).

Greater exposure to the ecosystem would enable refugees interested in venture-creation to possess knowledge of the inherent difficulties presented by the Swedish market as illustrated by the interview quote:

Entrepreneurship still hasn't become a serious career alternative to the other conventional career paths. So even if it is a hype, it's still not very many that are interested in starting their own businesses (10, manages a business incubator).

4.3.2 State of the environment

The pressure exerted on the capacity to integrate diverse societal norms has had an effect on the extent of visible success stories of entrepreneurial refugees and those seeking employment within the ecosystem. Entrepreneurship may not be the path chosen by the majority of refugees owing to the perceived risk of unstable income:

The first thing I talked to these guys is about starting their own business but then it was very important for them to have a steady income to provide for their families at home and to have some kind of security (4, provides mentoring platform for refugees).

4.3.3 Impacts

As a result of low entrepreneurial motivation stemming from the need for stable income, there have been fewer instances of visible success stories of newly arrived entrepreneurial refugees and of those seeking employment within the ecosystem. During the interviews, participants pointed towards refugees who had arrived in Sweden a decade earlier and were self-employed small business owners of convenience stores and restaurants. The likelihood of entrepreneurial success in Sweden is perceived by refugees to be lower than other countries as evidenced by the quote:

From my circle of friends and the ones that I know that left to Canada are usually very successful. The people who left for the US some are successful. I know people who went there and immediately got great jobs in large companies and I know for a fact that if they came to Sweden it would not be like this. It would be much more difficult for them to integrate. Acceptance within larger enterprises if you have a good skill sets isn't as difficult as it is in Sweden (3, arrived within the last six years).

According to Johansson (2006) a link exists between a society's stigma of failure and the amount of entrepreneurial activity within it. European countries have a low tolerance to business failure and there is an impact upon the refugees' willingness to engage in entrepreneurship. Thus, the stories of entrepreneurial success or lack thereof influence the perceived attractiveness of the ecosystem by the new arrivals:

If people perceive Sweden as a bureaucratic entrepreneur country then that reputation will spread and that's what we noticed with the Somali entrepreneurs who moved to the UK. Some of them didn't even try (in Sweden). They heard from relatives and other people that it was very difficult (8, involved in migration and integration programs at a think-tank).

4.3.4 Responses

The migration driving force puts pressure on the capacity to integrate various societal norms into the ecosystem thereby having an unintended effect on the extent of visible success stories of entrepreneurial refugees and those seeking employment within the ecosystem. A response mechanism has been the proliferation of information and services by the various actors in the ecosystem. However, given the plethora of bodies aimed at assisting refugees with acclimating to the Swedish culture the effectiveness has somewhat been hampered by coordination issues:

The organisations that work on these problems, they are not actually coordinated. They don't exchange information, and that creates the same bottlenecks through all the organisations (5, develops hackathons addressing refugee issues).

Coordination efforts could be improved by having such services in a hub as illustrated by the quote:

We have so many systems to help people. That's not the problem. It's just there's so many people that you meet and they are in different places. So this is a different way of doing it, the Newcomers Centre of Peel in Canada have everything under the same roof (8, involved in migration and integration programs at a think-tank).

Regarding the information given by the Employment agency it was suggested that a more tailored approach be utilised with a longer term focus towards the refugees' personal goals as an entrepreneur or in the labour force within the ecosystem:

Currently there is some information available at *Arbetsförmedlingen* but I think that they are put in the wrong level. I would think that maybe having a place I can refer to later on after saving some money and getting acquainted with the country whether with the banking system, whether with the employment system or whether with the real-life experience. So I do think maybe at a later step just to follow up or maybe to have resource that I can go and refer to that would be more beneficial. Like, let's say in a year or two (2, arrived within the last two years).

In conclusion, the results and analysis are summarised Figure 7 below.

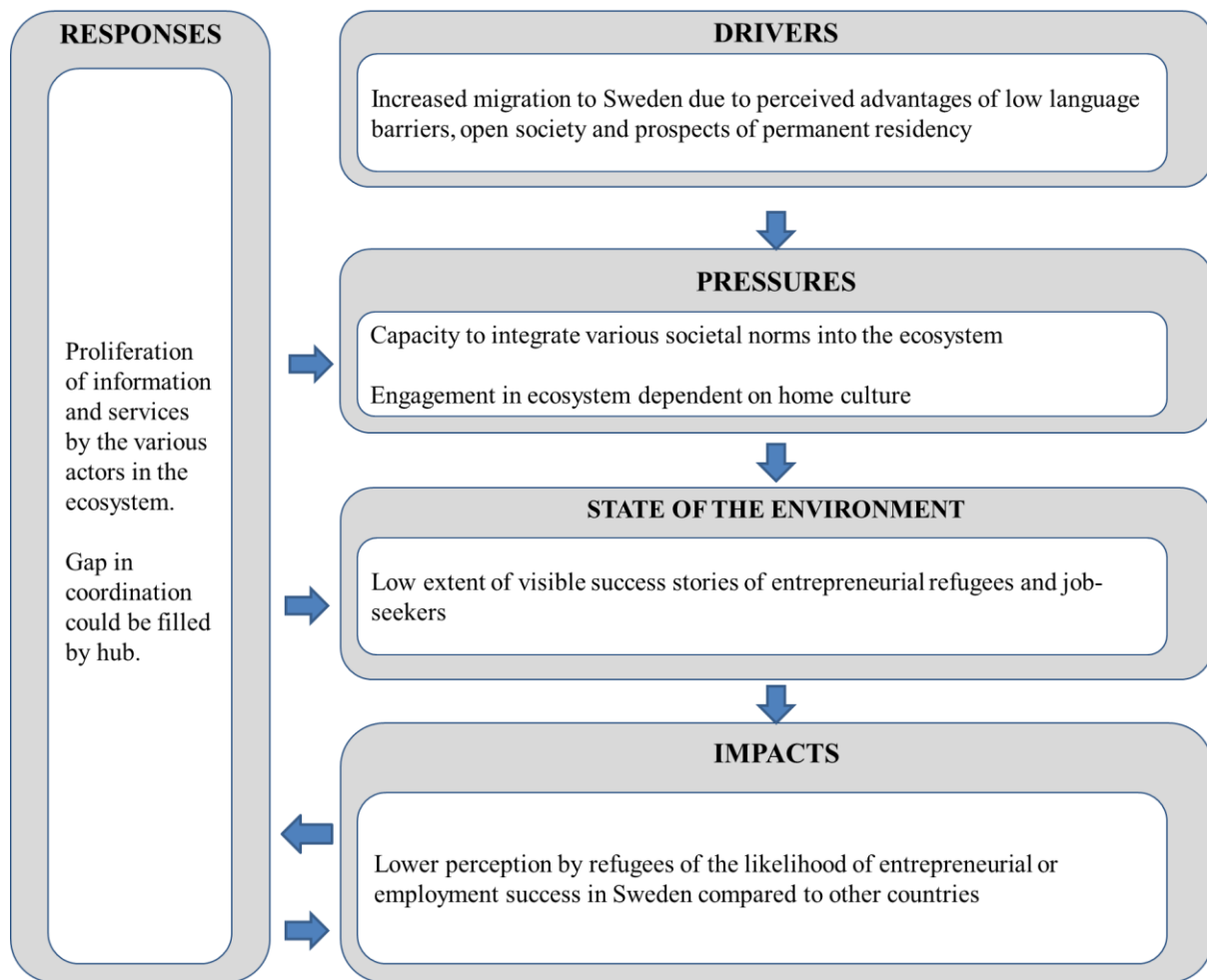


Figure 7: Summary illustrating DPSIR findings in the Culture entrepreneurship domain

4.4 Human Capital

4.4.1 Pressure

The influx of asylum-seekers and refugees into Swedish society puts pressure on the capacity to integrate not only the volume of new workers but also the diversity of skills with which they bring into the ecosystem's labour market. Unless the refugees have prior experience in specific fields such as IT, the likelihood of encountering obstacles in the search for work is high as evidenced by the interview quote:

Jobs also in Stockholm are very hard except IT domain. The IT domain has many chances and you can prove that you are professional or that you have experience. You can do things from home and introduce it to people and people can see the work but if you are an economist or if you have a law or science degree they cannot prove that. They have to work first to prove that (1, arrived within the last six months).

4.4.2 State of the environment

The pressure exerted on the capacity to integrate labour with diverse skill-sets has had an effect on the extent to which policymakers and employers within the ecosystem are willing to adapt their employment requirements.

For policymakers, the challenge is to adapt to the rise of an unskilled workforce within an industrialised nation. The refugees entering Sweden are part of a low skilled group whose previous work experience entailed manual labour. While not an obstruction to finding employment in their home countries, this lower level of skills is faced with legal impediments in Sweden as illustrated by the quote:

The regulation for the lower skilled jobs is very tight. Look at a taxi driver for example. It took me probably three or four months of effort and ten thousand kronor (to get a driver's license) and I am a twenty-year driver. So somebody comes here from Afghanistan how are they going to get a driving license to start driving a cab? And that's just the first hurdle. The second hurdle would be that if you look at the qualifications required to the exams and tests and qualification levels are required for driving a cab, it is probably going to take me a year. If it's my country we can probably just buy a car and put a taxi sticker and start working tomorrow morning (3, arrived within the last six years).

High minimum wages can also be considered a legal barrier which impedes the increase of unskilled jobs:

Human resources here are really expensive. If it is in Tehran you probably can pay somebody 300 (dollars) a month to come and serve you a coffee and that would be no problem. That guy or girl would get three hundred dollars, can feed their children, can pay some rent. Here if I want to hire somebody with the same skill-set I probably have to pay them fifteen thousand kronor then I probably have to put another five thousand kronor on top of that for the Arbetsgivaravgift. It costs me twenty thousand kronor for somebody to serve me coffee so, no, thank you (3, arrived within the last six years).

Thus, manual labour is often sourced in low-wage countries and the refugees entering Sweden with skills such as carpentry are unable to find work within their craft as explained by the interview quote:

Regarding Syrian refugees in particular, we have plenty of people who work in more crafty sort of shops like carpenter, blacksmith, electrician and mechanic. Those kind of things you can find more refugees but the problem is that they don't necessarily find something that fits their previous experience. I know one person who has been a carpenter for eleven years but here he cannot work as a carpenter because the stuff that he used to do is now produced in China and then shipped to Sweden (2, arrived within the last two years).

Turning to employers, the challenge to adapt is threefold. Firstly, Swedish employers have to assess the profiles and qualifications of the refugees, a process made difficult owing to their inability to appreciate the relevance of refugees' experiences in the Swedish business environment. The tool to validate qualifications therefore comes into play:

In Sweden if you apply for a job and let's say you did a Masters in Handels, nobody is going to ask for your degree certificate because the business works here with trust. If I say a university name in Syria, they don't recognise it anymore, then they don't have the trust anymore, and other problem is (employers) don't have an alternative validation mechanism (9, recruits at a business incubator).

This lack of trust of foreign qualifications is not unique to the refugee group but also applies to other immigrants in general as demonstrated by the quote: "I've heard about people

coming with Ivy League, like PhD educations and having a problem finding a job. So in that way it's not very meritocratic" (4, provides mentoring platform for refugees).

Assessing profiles of refugees is also problematic for Swedish employers who are not accustomed to backgrounds which contain non-traditional work experience when compared to their Swedish peers:

LinkedIn and all of those resume formats have always favoured linear way of profiling. What if you come from a warzone where you have to take whatever job to get to survive? So you may be a computer science student but you have to take a carpentry or building construction worker job because that's what pays and there are no software companies anymore in your city. So, that is a challenge because in our world we have never seen profiles like that, that a person studies computer science and works as a construction field worker. That doesn't happen in Sweden but in this case that is a big challenge as well, to profile that person as an expert (9, recruits at a business incubator).

Secondly, the employers have to consider the language capabilities of the applicants. Swedish employers are usually inclined to hire Swedish-speaking professionals.

What I found is that when we were interviewing internship companies...being so international they really wanted the (Swedish) language experience (6, offers academic programs for refugees).

Finally, the employers need to determine the work culture fit. Social norms play a role in the availability of opportunities for low skilled work. In Sweden, the notion of hiring someone to work for you to do something you could do on your own is considered a workplace taboo:

In Sweden even if you can afford somebody who'd serve you coffee it is socially bad. You know nobody accepts that I am sitting here with my big fat stomach and somebody is serving me coffee every two hours (3, arrived within the last six years).

Given the diverse cultures of those entering the country as refugees there is also an effect of societal apprehension about the new arrivals' adherence to the Swedish value of equality as evidenced by the quote:

One important criterion, which we will ask (the program applicants) is about tolerance. We can remind them if they are going to be extremely employable in Sweden, they can't behave like that (intolerantly) (6, offers academic programs for refugees).

These concerns, however, may stem from an overall lack of experience with the different cultures as described by the interview quote:

I was getting into a big company and the interviewer she asked me, "Do you have any problem working with nine females and a female boss?" Look, being a Middle-Eastern guy does not necessarily mean that I have an issue (2, arrived within the last two years).

In general Swedish employers do not necessary recognise the benefits of other work cultures in their workplaces as the interview quote attests:

Swedes in general are ok with diversity, they are ok with immigration. However when you go to the Swedish labour market, they don't see diversity as an opportunity, sometimes they see

it as a threat. The problem is not that Swedes don't like to work with foreigners, it is more that they are not aware of the value that another labour culture can bring to the work environment (5, develops hackathons addressing refugee issues).

4.4.3 Impacts

As a result of the low extent to which policymakers and employers within the ecosystem are willing to adapt regulations and requirements the instances of unemployment have increased. Indeed, of the refugees who have arrived in the past ten years, only 53% of them have found employment (Billner & Rolander, 2015). A growing number of refugees also accept jobs they are overqualified for given the investment of finances and time which make the barriers to exiting a low-skilled career path high. According to Anderson & Winerfield (2011) it is difficult to move away from jobs in which the migrants are overqualified for to jobs that they are better suited to. This is shown by the interview quote:

So imagine you are an engineer. You start looking for engineering jobs, you can't get any, then someone asks you, "Do you have a driver's license?" Yes. "You want to drive a cab?" Yes. Then you drive a cab and you only do that for the next five years and are never going back (5, develops hackathons addressing refugee issues).

4.4.4 Responses

The migration driving force puts pressure on the capacity to integrate the volume of new workers with diverse skills thereby having an effect on the extent to which policymakers and employers within the ecosystem are willing to adapt regulations and requirements. In response to the unemployment of refugees as well as over-qualification, technology companies have further lowered their recruitment barriers: "Swedish IT (companies) like Ants and Dice are looking for programmers at asylum reception centres" (8, involved in migration and integration programs at a think-tank). The motivation for technology companies to embrace highly-skilled refugees in the IT field can be understood when considering the scale of the entrepreneurial ecosystem's need as explained by the quote:

They told me in the IT domain Stockholm needs like 50,000 positions in the next five years. So they are finding programmers, finding people with IT background, engineering experience (1, arrived within the last six months).

Educational institutions have also responded by developing programs targeted at refugees. Although having a degree from a Swedish institution may not reduce the risk of unemployment, the possibilities for suitable job-matching are improved (Duvander, 2001). The *Korta vägen* course, which has been running since 2013, was favourably mentioned by an interviewee who had participated in the program which consisted of intensified Swedish language training with a course on how to find a job and consultation with a personal coach. According to the interviewee, the job search was aided by the involvement of the university. Therefore, this notion of credibility of education institutions ties in with the rationale for creating such programs:

You realise that of all these refugees there are people with degrees and working experience, and they need to refresh that and they need to adapt to new working situations. If you are a refugee... even more you need to have experience from working in a company in Sweden.

The ultimate goal for this program is that these people will be extremely employable once we have finished this (6, offers academic programs for refugees).

Other initiatives with the aim of integrating refugees and increasing diversity in the Swedish industry have been introduced by business networks. The integration projects give refugees the opportunity to be inserted in Swedish companies as trainees and to train refugees to start and run their own businesses in Sweden.

Regarding the general effectiveness of initiatives targeting refugees according to the interview quote below it is a matter of viewing them as entrepreneurs and highly-skilled workers first and refugees second:

The problem is that we are trying to serve refugees all the time and this is an actual refugee saying this. He said that the problem within innovation in services for refugees right now is that it is not a peer-to-peer relationship. It is not “I am proposing a service and you are a customer”, it is more “I am doing something good to help you”, that’s a huge difference. When you do a peer-to-peer relationship, you actually create something but when it is me helping you, then it is nothing else that goes to that. We can help entrepreneur refugees, if we start talking to them as just what they are, which is people with a background in innovation, They have been engineers for more time than they have been refugees right? (5, develops hackathons addressing refugee issues).

As the literature review has shown, it is not uncommon that immigrants choose to start their own business once they find themselves precluded of the possibility of being inserted in the job market. Thus, engagement in entrepreneurship can also be considered a refugee’s response mechanism to unemployment and over-qualification:

For immigrants or refugees, I’m thinking there are some conditions that favour their entrepreneurial path too. They lack language skills, the credit history to get a bank loan, but they have this creative touch to themselves and many of them are entrepreneurs. Just looking at the pool of people between 18 and 30, it is much more common for entrepreneurs to be of foreign heritage than Swedish. When thinking of immigrants and refugees connected to entrepreneurship I don’t think of the connection to be negative, I see there are many things to be in favour of their success (10, manages a business incubator).

Although that is a feasible possibility, the path to success is still challenging and choosing entrepreneurship as an alternative to unemployment may end up being riskier, as previously mentioned, and even damaging future career opportunities and their financial security.

Start-up or entrepreneurship is an area that you can be certain that 90% of the people are going to fail. So imagine I am a refugee talent from abroad. My first concern may be some safety and stability after this crisis and would I choose a field which is as difficult as a start-up? They have humongous challenges to integrate and ensure the stability and safety of their family with some stable income (9, recruiter at a business incubator).

In conclusion, the results and analysis are summarised Figure 8 below.

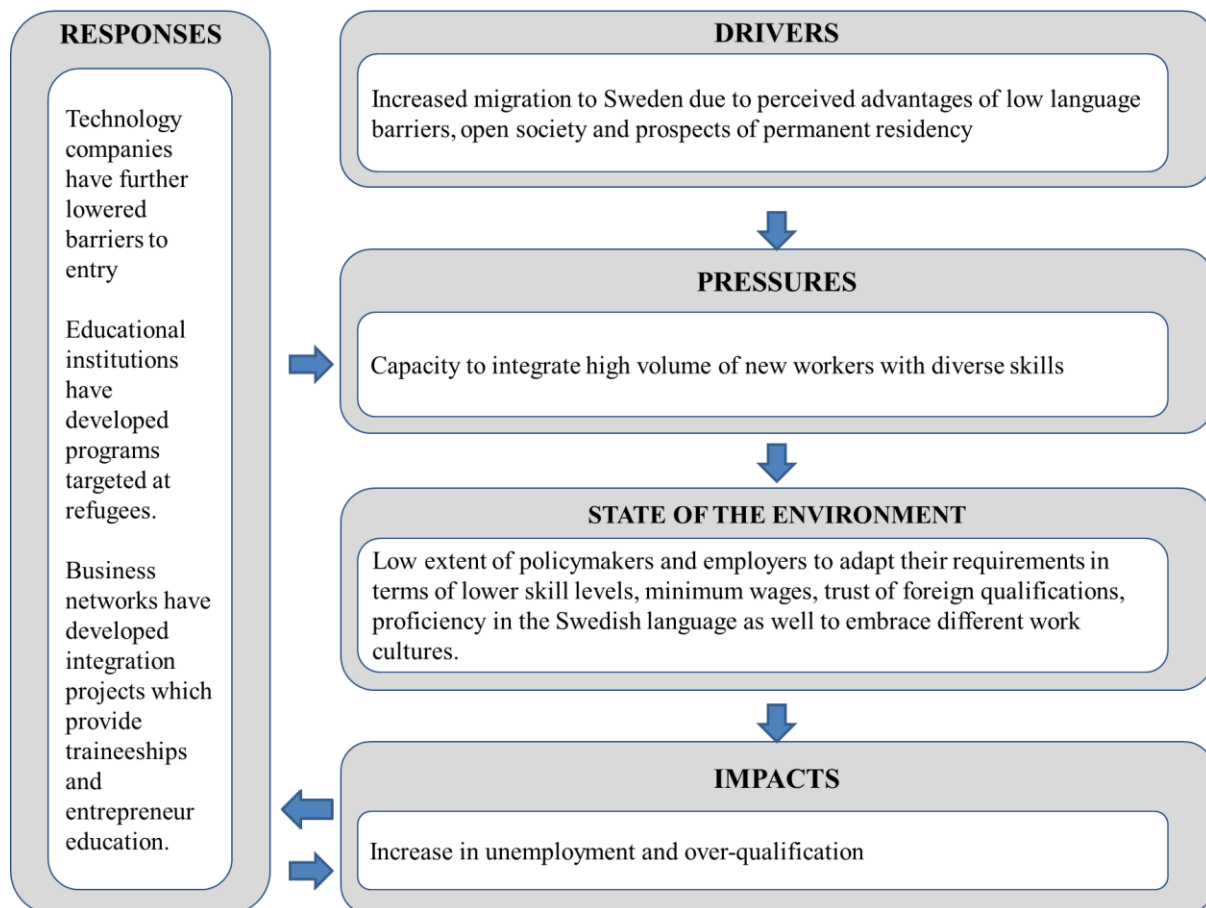


Figure 8: Summary illustrating DPSIR findings in the Human Capital entrepreneurship domain

4.5 Markets

4.5.1 Pressure

The influx of asylum-seekers and refugees into Swedish society puts pressure on the capacity to integrate various societal norms into the ecosystem as discussed in the Culture section, which is in a similar vein to Markets in that entrepreneurial refugees and job-seekers need to understand Swedish business culture. Thus, in order to start and operate a business it is important for entrepreneurs, whether foreign-born or local, to build networks of other entrepreneurs as well as customers which can be a difficult feat: “The main struggle for the companies in the incubator I’d say is just reaching out, the marketing part, the expansion part” (10, manages a business incubator). The presence of established networks ensures the ease of transition into the Stockholm ecosystem as illustrated by the quote: “Having a network here made a big difference on my business. When I moved here I already had a network” (3, arrived within the last six years).

The ability of entrepreneurial refugees to build and grow businesses or to find employment not only relies on the Swedish networks but also may rely on the ethnic networks. The enclave effect is such that those in the same cultural group who live and work in the same vicinity can benefit from the network’s employment opportunities as well as customer

outreach (Raijman & Tienda, 2000; Toussaint-Comeau, 2005). However, the development of ethnic networks has not been viewed in Sweden in terms further than culture:

It's not very common to talk about in Sweden. We don't really talk about ethnic communities as ethnic networks in that way. We talk about it when it comes to civil society, maybe an NGO, something with culture but not in the same sense of the organisations that we've been looking at abroad (8, involved in migration and integration programs at a think-tank).

4.5.2 State of the environment

The pressure exerted on the capacity to integrate diverse societal norms has had an effect on the extent of networks that entrepreneurial refugees and those seeking employment within the ecosystem have access to. According to Gold (1992) there is greater likelihood that refugees are embedded in a limited network compared to other immigrants. This may become a vicious circle in that in order to effectively build a Swedish network they need to understand the socialisation mechanisms which they experience in a limited way owing to their geographic isolation. This is evidenced by the quote:

The speed of stuff happening here is generally much lower and that's why making good new networks also is slow. So networking from what I know either from the Middle East or from other foreign companies that I worked with before, things happens like the speed of light, even company bureaucracy (3, arrived within the last six years).

4.5.3 Impacts

As a result of the limited access to networks the employment-seeking endeavours of refugees are negatively impacted upon:

If you are an IT guy you need to be in IT venues and creating those contacts is very important but refugees don't get that chance. I think in Sweden eighty percent of jobs you actually get through your network. And when it comes to jobs, I think fifty percent of them are not even published online or in any other public way, so creating a network is important (5, develops hackathons addressing refugee issues).

Similarly, entrepreneurial refugees face challenges when bringing their products to the marketplace as a result of low access to customer networks as explained by the quote:

If selling that person's skills to find a job is difficult, imagine the person selling a product to the local market, the customers. That sounds even more difficult. But still, if they could build a team of local people, like some Swedish salesperson, some local marketing community, if they could include in the team then it's definitely possible (9, recruits at a business incubator).

4.5.4 Responses

The migration driving force puts pressure on the capacity to integrate various societal norms into the ecosystem thereby having an unintended effect on the extent of access that refugees have to Swedish entrepreneurial and customer networks. A response mechanism has been the rise of mentorship and network-building initiated by various actors in the ecosystem. The benefit of such schemes as described in the interview quote is the relative speed compared to governmental bodies:

I know of a recently founded mentorship program where their goal that every refugee must be connected to a local professional in Sweden so that we get to fill a gap much earlier than if they go through Migrationsverket, Arbetsmedlen, and all these kind of government bodies

which take five to seven years before they could understand what's happening. Through that I was able to find these twenty refugee talents for the tech recruitment mingle (9, recruits at a business incubator).

The founder of one such mentoring platform initiated recently chose to specifically target technology companies in the ecosystem because of experiences of the open-minded nature of those companies:

I think generally when you reach out to people in Sweden you will get denied or ignored but the tech industry is special and I think that is a huge enabler for people that come as asylum-seekers or foreigners. Typically the mentors are computer science grads or HR staff in the tech companies or entrepreneurial companies. I think that's mainly because I've been pushing it to that audience because I think that they are early adopters of these kind of services, very open (4, provides mentoring platform for refugees).

Start-ups in the IT domain in particular not only have the flexibility and speed to enable integration of refugees into the ecosystem but also have human capital needs that refugees are in a position to fill in terms of expanding the companies' customer bases:

If you are a company, you have potential to find really great employees among people that just came here and I think hiring people could be a huge enabler in terms of reaching out to new markets. I talked to someone from the Gulf countries and he said Swedish hardware is really good and he'd like to find suppliers. So I think those connections could be very valuable if Swedish companies see if they exist (4, provides mentoring platform for refugees).

Mentoring programs may be popular to companies in general as opposed to providing internships and other job opportunities as these initiatives require less commitment than offering employment as explained by the quote:

More regions focus on our project with entrepreneurship for newly arrived. It might be an easier first step to become a mentor and work with a person than to offer an internship for three months. We have a tradition in Sweden of not to think of entrepreneurship as a way of make a living, unfortunately. We know that many of the newly arrived has experience of being entrepreneurs and we see this as a great opportunity of new dynamic enterprises in Sweden (7, involved in social integration programs at a business organisation network).

In terms of strengthening ethnic networks there are governmental initiatives located in Malmö. From the interviews, no such initiatives were mentioned within the Stockholm entrepreneurial ecosystem which presents a gap that is yet to be addressed:

The Somali Information and Business Centre in Malmö is a state initiative which sort of goes to show in Sweden it's sort of a top-down. They try to create what in other countries would be a bottom-up organisation. The Canadian model is just a totally different way of bottom-up perspective when it comes to labour market and introduction for newcomers (8, involved in migration and integration programs at a think-tank).

In conclusion, the results and analysis are summarised Figure 9 below.

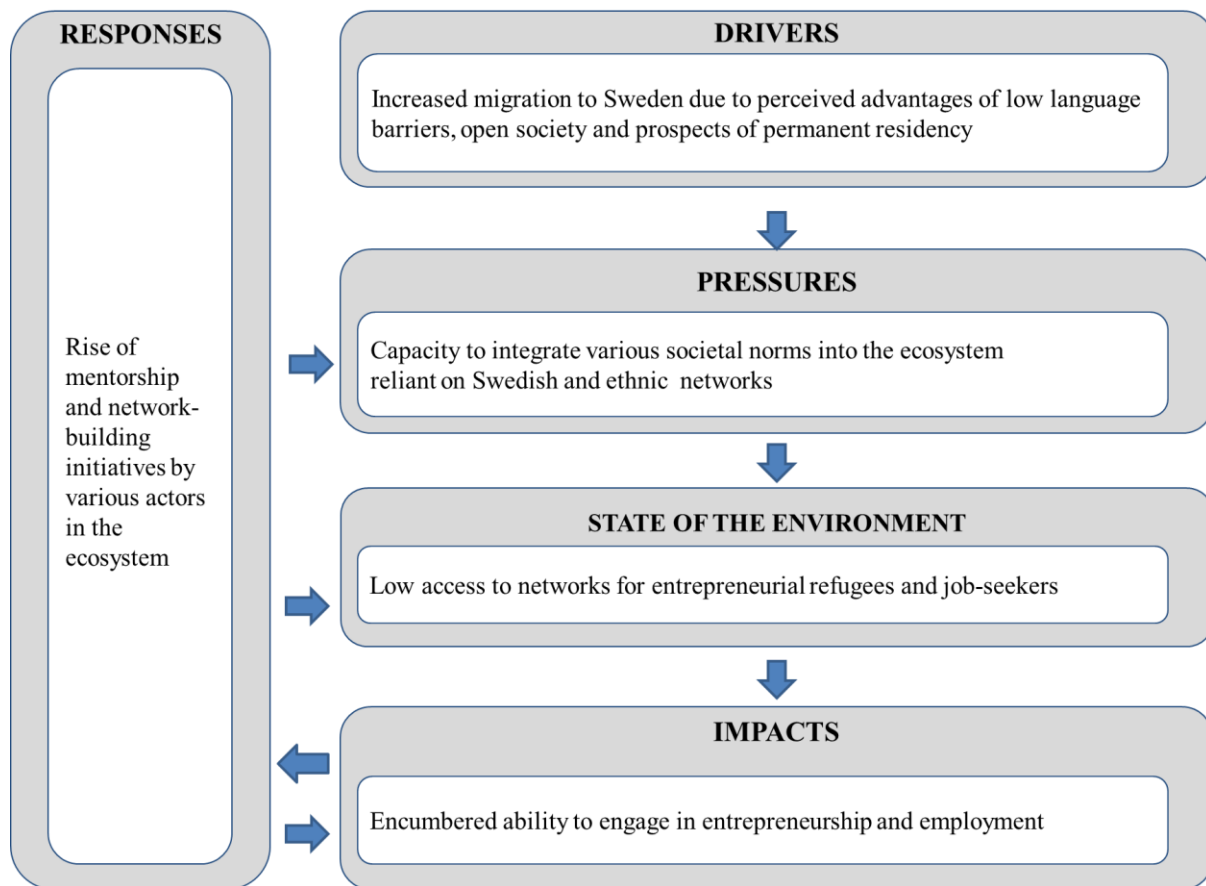


Figure 9: Summary illustrating DPSIR findings in the Markets entrepreneurship domain

4.6 Finance

4.6.1 Pressure

The influx of asylum-seekers and refugees into Swedish society puts pressure on the capacity to integrate them into the financial system. Fleeing from their home countries often means the refugees have fewer financial resources and future income streams by way of employment are difficult to obtain. As discussed in the Supports section, the government's financial support may not be sufficient when including transportation expenses.

4.6.2 State of the environment

The pressure exerted on the financial system has had an unintended effect on the extent to which refugees can access financial services. The easiest way to manage one's financial resources is usually by making use of bank accounts, a process which is complicated for refugees because of documentation issues. As discussed in the Policy section the wait to process applications is lengthy during which time the Migration Office is in possession of their paperwork. There are others who simply do not have those papers when they arrive in Sweden. Thus, opening a banking account is difficult as evidenced by the quote:

I have been employed for two months and a half and until now I cannot open a bank account. I have a temporary personal number and since all my documentation - my passport, my ID card - is with the Migration Office no bank allows me to do that (2, arrived within the last six months).

In addition, the availability of funding for entrepreneurs in the early stages of their businesses is lower compared to those in the advanced stages despite the presence of funding bodies:

It is said that there is a lot of venture capital right now for start-ups to get, and that's very true, and in comparison to many other countries too, we have a lot. The only thing is that this venture capital usually goes for the more advanced start-ups. So the very very early start-ups that are still looking to build their products, still looking for a programmer or maybe still need their first 500, 000 SEK or million SEK- those money is very hard to get. So access to capital is a struggle for very early stage companies. But then you have, in that case, you have VINNOVA, we have Almi, they have grants for very early stage companies that have difficulties rising money from other investors (10, manages a business incubator).

4.6.3 Impacts

As a result of the encumbered access to financial services the entrepreneurial endeavours of refugees are slowed. There is an awareness of the administrative difficulties in dealing with the banking sector: "This stage of opening a bank account...how to process, how to start your own business I think it will be a big problem" (1, arrived within the last six months). As illustrated by the interview quote there is lower willingness on the part of bigger banks to deal with banking issues associated with refugees such as depositing certain sums of money:

When I came to this country I had five thousand euros in my pocket and it is legal. I came here, opened a bank account and got a card. I went into the bank and I said "OK. This is five thousand euros I want to put in my bank account". The guy freaked out so hard that it was like I was robbing him or something, and I couldn't put my money into my bank account because the bank said "Well, we do not know the origin of this money". When they flatly refuse there is nothing you can do and every single bank is like this. I have tried the big ones but I know that there are smaller more flexible banks which you can work with (3, arrived within the last six years).

Therefore, refugees may have to wait to build a good credit history in order to build trusting relationships within the banking sector:

Raising capital is always a struggle (...). But I'm thinking refugees that just recently have come they lack credit history, which is why it is difficult to raise money. But if they have been here for a very long time, and you have that credit history, I don't see why there is any objective reason for anyone to make it harder for you to get loans but of course I mean there is still some kind of conservative rules and racism but it is not typical (10, manages a business incubator).

4.6.4 Responses

The migration driving force puts pressure on the capacity to integrate them into the financial system thereby having an unintended effect on the extent to which refugees can access financial services. Response mechanisms relating to these issues were not identified by the interview participants which represents a gap in services provided. The funding options are the same for entrepreneurs in the ecosystem and as described by the quote bootstrapping resources is important:

So for the round one I did it myself. In one project we actually managed to get some money but that's not our main business that's a side project. For the round two we are still too small because for the round two you should go and ask for like twenty million kronors or for a

couple million Euros. To ask for that amount of money you have to have some sort of market share or some level of sales which we didn't reach yet (3, arrived within the last six years).

In conclusion, the results and analysis are summarised Figure 10 below.

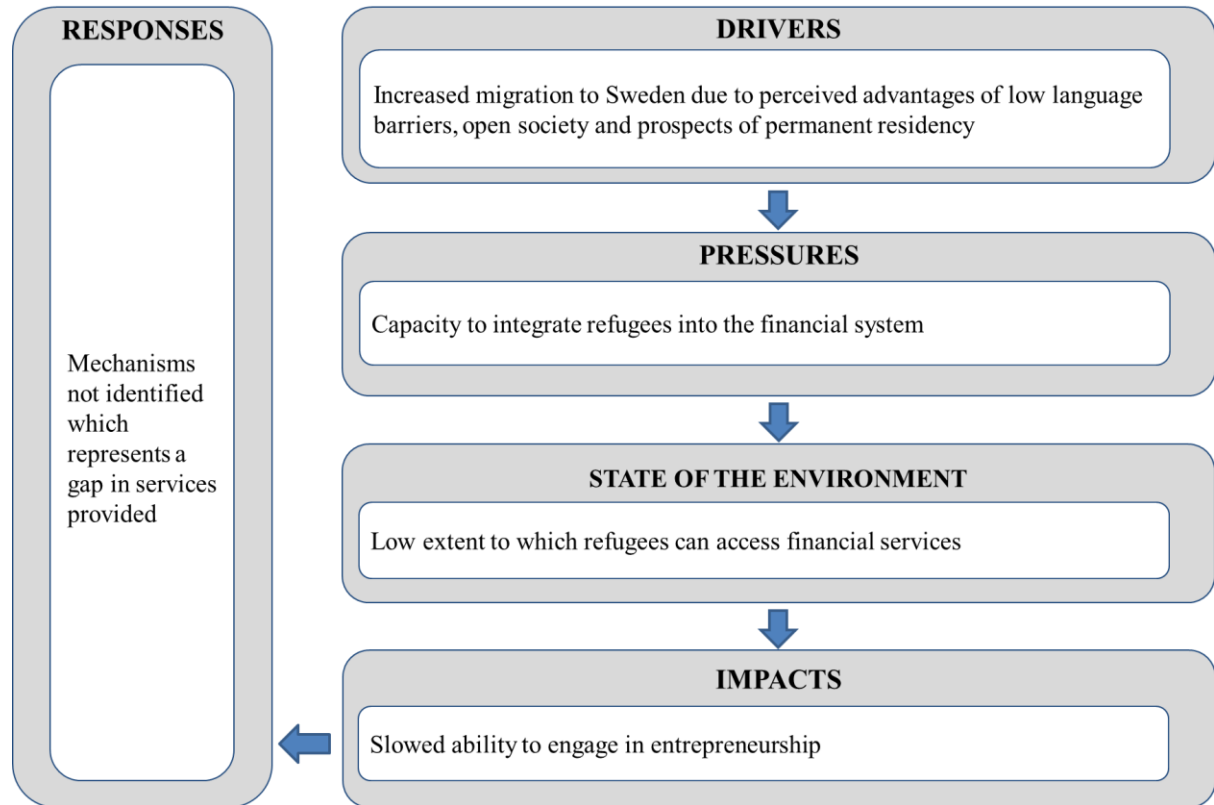


Figure 10: Summary illustrating DPSIR findings in the Finance entrepreneurship domain

5. Summary

This summary chapter consists of six sections. 5.1 is a discussion of Policy which is followed by Supports in 5.2 and Culture in section 5.3. Thereafter, Human Capital and Markets are presented in 5.4 and 5.5 respectively. The chapter concludes with Finance in 5.6.

The purpose of this thesis is to address the theoretical gap of the concept of entrepreneurial ecosystems in relation to refugees. This section provides an answer to the question:

How has the Stockholm entrepreneurial ecosystem responded to the current influx of refugees?

In order to understand the response mechanisms within the entrepreneurial domains of Policy, Supports, Culture, Human Capital, Markets and Finance it was necessary to determine the specific needs that those mechanisms fulfilled in the overall ecosystem through the lens of drivers, pressures, change of state of the environment and impacts.

5.1 Policy

The primary driving force underpinning the change in the ecosystem is the increased migration to Sweden owing to the perceived advantages that Sweden has to offer. These include the population's proficiency in the English language, the openness of Swedish society and the prospect of permanent residency. Thus, Sweden is a migration destination for refugees owing to the factors that are perceived as ensuring a seamless transition into a new society.

Integrating asylum-seekers and refugees into Swedish society however turns out to be a challenge administratively and puts pressure on processing systems and housing arrangements. The lengthy waiting time resulting from this pressure breeds uncertainty which is detrimental to the refugees' mental well-being as well as the relative preparedness to enter the ecosystem as job-seekers or entrepreneurs. Those that are able to secure employment within a few months of arriving in Sweden are, in essence, operating outside the law. Refugees' housing, which is under the purview of the government, also has an impact on their ability to establish roots in the community owing to the fact that having a home in Sweden is related to employment prospects.

The response mechanism introduced a few years before the current refugee crisis enabled refugees to switch immigration tracks if they secured employment offers. However, refugees are unaccustomed to navigating these regulations as well as with the government bodies responsible which hinders the effectiveness of the response mechanism. Therefore, the influence of lobby groups is required to adapt the ecosystem given the psychological and professional impacts of the prolonged waiting time.

5.2 Supports

As explained in the preceding section, the government decides upon the housing arrangements of refugees in the centres which has significance on the employment and entrepreneurial opportunities available. This housing pressure affects the transportation needs of the refugees as they are placed far from the city centre yet do not have sufficient funds to

travel. Thus, the ability of entrepreneurial ecosystem connectors to share their knowledge of the ecosystem is limited. A response mechanism has been the increase in hackathons which, in addition to creating ideas to solve the refugee crisis, unify diverse actors in the ecosystem.

5.3 Culture

The assimilation of asylum-seekers and refugees into society puts pressure on the capacity to incorporate various social norms into the ecosystem and refugees' entrepreneurial ambition depends on their home country experiences. In addition, stemming from the need for stable income there is low motivation to engage in entrepreneurship resulting in fewer visible success stories of newly arrived entrepreneurial refugees within the ecosystem. Therefore, the likelihood of entrepreneurial success in Sweden may be perceived by refugees to be lower than other countries.

The response mechanism has been an increase in information and services produced by the various actors in the ecosystem, the effectiveness of which is somewhat hampered by coordination issues. These coordination issues among the various entities dealing with refugees' social integration could be improved by the establishment of a hub.

5.4 Human Capital

The pressure on the capacity to integrate a high volume of newly-arrived labour with diverse skill-sets has had an effect on the extent to which policymakers and employers within the ecosystem are willing to adapt their regulations and requirements in terms of lower skill levels, minimum wages, trust of foreign qualifications, proficiency in the Swedish language and the embrace of different work cultures. The low flexibility has led to higher risks of unemployment and over-qualification among the immigrant population as a whole.

In response, technology companies have further lowered their recruitment barriers. In addition, education institutions have developed programs targeted towards refugees while business networks have developed projects giving refugees the opportunity to become trainees at companies or to be mentored by entrepreneurs. The general effectiveness of such initiatives depends on viewing the refugees as entrepreneurs or workers first and foremost. Engagement in entrepreneurship can also be considered a refugee's response to unemployment and over-qualification but this path is not without its own risks.

5.5 Markets

While the pressure on Culture is the capacity to incorporate social norms, for Markets it is the capacity to integrate refugees into various business networks, both Swedish and ethnic. Because of limited access to networks refugees are obstructed from opportunities in employment and entrepreneurship. In response, there has been an increase in mentorship and network-building initiated by various actors in the ecosystem which may be popular to companies owing to the lower commitment required which was touched upon in the section on Human Capital above. The openness of technology companies enables the inclusion of refugees within Stockholm's entrepreneurial ecosystem as well as the development of bridges to the refugees' diaspora network, in so doing expanding the companies' market reach.

5.6 Finance

The influx of asylum-seekers and refugees into Swedish society puts pressure on the capacity to integrate them into the financial system which has had an effect on the extent to which refugees have access to financial services. The entrepreneurial undertakings of refugees are slowed as a result of encumbered access to financial services. However response mechanisms relating to these issues were not identified which represents a gap in services provided.

6. Discussion of main contributions and implications

In this chapter the thesis is concluded by discussing contributions. Theoretical contributions are presented in 6.1 followed by practical contributions in 6.2. Limitations are described in section 6.3 and areas of further research are suggested in 6.4.

6.1 Theoretical contributions

The purpose of this study was to explore the notion of ecosystems as complex systems that adapt in response to a dynamic and increasingly networked world by investigating how the Stockholm entrepreneurial ecosystem responded to the current influx of refugees. While previous research on entrepreneurial ecosystems focused on enumerating the factors that constitute a healthy ecosystem, the first of our theoretical contributions lies in providing a systematic method to determine how the ecosystem adapts to change. Through the application of the DPSIR model, interdependencies between the factors were illustrated as well as potential causal relationships from the driving force of migration to the impacts experienced by the ecosystem which will be described in the section on practical implications below. Thus, moving from lists of factors towards an understanding of relationships further distinguishes the ecosystem concept from that of entrepreneurial or innovation systems.

Our second contribution relates to the entrepreneurial activities of refugees. In previous studies of immigrants the terms of self-employment and entrepreneurship are treated interchangeably yet our study draws attention to entrepreneurship in the sense of “high-growth start-ups.” Newly arrived refugees stand to benefit from such type of entrepreneurship as pivotal sources of employment or venture-creation.

Lastly, the research question is highly relevant in the current context of global migration. Undoubtedly, the influx of a high volume of diverse refugees will have an impact on Swedish society for years to come owing to the change in societal composition. Consequently, municipalities throughout the country will be affected to various degrees. The way different groups deal with this change will shape the environment in the near future and likely create a demand for initiatives that seek to include this group of newcomers as integral part of the society as a whole.

6.2 Practical implications

The current influx of refugees has caused the Migration Office to deal with an unpredictable number of applications which has led to prolonged processing times. In addition, the refugees’ housing arrangements, which are under governmental jurisdiction, are considered too far away from the city centre. The ripple effects of the refugees’ geographic isolation and dormancy are felt in integration efforts. Attempts have been made to address refugee issues through different entrepreneurial initiatives, such as hackathons, mentorship and network-building, education programs, traineeships with companies that allow refugees to create professional links. The practical implications for the various entities seeking to provide information and services targeted towards refugees is the need for better coordination mechanisms as well as viewing the refugees primarily as entrepreneurs or workers. In this

regard, the Canadian model of integration through hubs may be an example for the Stockholm entrepreneurial ecosystem to emulate in its Support domain.

The openness of technology companies enables the inclusion of refugees within Stockholm's entrepreneurial ecosystem in Markets as they lower recruitment barriers in Human Capital. A change in mind-sets will be necessary in order to address unemployment and over-qualification of refugees. The practical implication for the ecosystem could be a greater investment in Human Capital, not only in terms of raising the skill level and Swedish language ability of refugees but also in terms of redesigning recruitment metrics and broadening Culture mind-sets. Another practical implication on a Policy level could be, for instance, the rethinking of lower wages and corresponding tax breaks similar to the British model which has been a debated issue among Swedish politicians as a means of creating jobs for newly arrived refugee (Schück & Olsson, 2015) Finally, the practical implication of the lack of identified response mechanisms in financial services represents a market opportunity for entrepreneurs and other actors in the ecosystem.

6.3 Limitations of contributions

Given the exploratory nature of this study, the findings are largely descriptive. Owing to the research focus on Stockholm the findings are not generalizable to other entrepreneurial ecosystems in Sweden. In addition, while response mechanisms were not identified for the Finance domain this does not necessarily preclude their existence.

6.4 Areas of further research

The thesis has used the DPSIR model to evaluate the responses of Stockholm's entrepreneurial ecosystem to the current influx of refugees. Other notable regions in which to conduct similar research, as mentioned in the Methodology chapter, could be ecosystems in Gothenburg and Malmo. Comparative studies could determine which domains each region is excelling at and which require further development. Alternatively, the DPSIR could be applied at different points in time to determine the effectiveness of the response mechanisms. In particular, the pressure of prolonged waiting times is causing some asylum-seekers to withdraw their applications ("Weary asylum seekers," 2016). An investigation could be carried out to determine the distribution of highly-skilled and low-skilled that chooses this path and the impact on the ecosystem.

References

- Aldén, L. and Hammarstedt, M. (2014). Integration of immigrants on the Swedish labour market – recent trends and explanations. *Linnaeus University Centre for Labour Market and Discrimination Studies Working Papers*, 9.
- Alexandre, R., Victorine, A. and Yansi, X. (2007). *Factors influence entrepreneurial immigrants come to Sweden to create businesses*. Jönköping: Jönköping University.
- Andersson, P. (2006). *Four essays on self-employment*. Stockholm: Stockholms University.
- Andersson, P. and Wadensjö, E. (2004). *Self-Employed Immigrants in Denmark and Sweden: A Way to Economic Self-Reliance?* Bonn: IZA.
- Anderson, S. and Winefield, A. (2011). *The impact of underemployment on psychological health, physical health, and work attitudes*. New York: Springer.
- Aspen Network of Development Entrepreneurs (2013). *Entrepreneurial ecosystem diagnostic toolkit*. Aspen Institute, UK
- Bailey, T., Waldinger, R., Mollenkopf J. and Castells, M. eds. (1991). *The Changing Ethnical/Racial*. New York: Russell Sage Foundation.
- Bager, T. (2002). *Invandervirksomheder I Danmark – med vægt på perioden siden 1980*. Århus: Erhvervsarkivet.
- Balzat, M. and Hanusch, H. (2004). Recent trends in the research on national innovation systems. *Journal of Evolutionary Economics*, 14 (2), pp. 197–210.
- Berg, B. (2001). *Qualitative research methods for the social sciences*. Boston: Allyn and Bacon.
- Bernard, W. (1977). Immigrants and refugees: their similarities, differences and needs. *International Migration*, 14 (4), pp. 267-81.
- Bernstein, P. (1998). Are Networks Driving the New Economy? *Harvard Business Review*. Nov-Dec. Reprint 602.
- Bevelander, P. (2000). *Immigrant Employment Integration and Structural Change in Sweden, 1970-1995*. Lund/Södertälje: Almqvist & Wiksell International.
- Bevelander, P. and Lundh, C. (2007). *Employment Integration of Refugees: The Influence of Local Factors on Refugee Job Opportunities in Sweden*. Bonn: IZA.
- Billner, A. and Rolander, N. (2015). Refugees: Welcome to Sweden, You'll Get a Job in a Decade. *Bloomberg*, [online] 01 October. Available at <www.bloomberg.com> [Accessed on May 22 2016].

- Borjas G. (1986). The Self-Employment Experience of Immigrants. *The Journal of Human Resources*, 21, pp. 485-506.
- Berasategi, L., Arana, J. and Castellano, E. (2011). A comprehensive framework for collaborative networked innovation. *Production Planning & Control*, 22(5-6), pp. 581-594.
- Boschma, R. and Martin, R. (2010). *The Handbook of Evolutionary Economic Geography*. Cheltenham: Edward Elgar.
- Braun, G. and Diensberg, C. (2007). Cultivating entrepreneurial regions - Cases and studies from the network project, Baltic entrepreneurship partners. In: *Rostock Contributions to Regional Science*, 19. Rostock: Universität Rostock, Wirtschafts- und Sozial-wissenschaftliche Fakultät.
- Braunerhjelm, P. and Henrekson, M. (2013). Entrepreneurship, institutions, and economic dynamism: Lessons from a comparison of the United States and Sweden. *Industrial and Corporate Change*, 22(1) pp. 107-130.
- Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse Education Today*, 11, pp. 461-466.
- Böcker, A. and Havinga, T. (1997). *Asylum Migration to the European Union: Patterns of Origin and Destination*. Nijmegen, The Netherlands: Institute for the Sociology of Law.
- Camagni R. and Capello R. (1999). Milieux Innovateurs And Collective Learning: From Concepts To Empirical Findings. In: *International Conference on Local development in Europe: new paradigms and models for economic policy, organised by University Carlo Cattaneo LIUC and University dell'Insubria*. 1-2 October 1999. Varese.
- Camarinha-Matos, L. and Afsarmanesh, H. (2007). A comprehensive modeling framework for collaborative networked organizations. *Journal of Intelligent Manufacturing*, 18(5), pp. 529-542.
- Carr, E., Wingard, P., Yorty, S., Thompson, M., Jensen, N. and Roberson, J. (2007). Applying DPSIR to sustainable development. *International Journal of Sustainable Development & World Ecology*, 14, pp. 543-555.
- Castles, S. and Miller, M. (2003). *The Age of Migration*, New York: Guilford Press.
- Catanzaro, M. (1988). Using qualitative analytical techniques. *Nursing: research theory and practice*, The CV Mosby Company, St.Louis, pp. 437-456.
- Cooke, P., Asheim, B., Boschma, R., Martin, R., Schwartz, D. and Tödtling, F. (2011). *Handbook of Regional Innovation and Growth*. Cheltenham: Edward Elgar.
- Cooke, P. and Morgan, K. (1998). *The associational economy: firms, regions, and innovation*. Oxford: Oxford University Press.

- Dohlmann, C. (2001). Self-employment among male immigrants in Denmark. Long-term unemployment and comparative advantages. In: *The Danish National Institute of Social Research, Working Paper 08*.
- Downe-Wambolt, B. (1992). Content analysis: method, applications and issues. *Health Care for Women International*, 13 (1992), pp. 313–321.
- Durst, S. (2015). Situation Analysis: Sweden. In: Viljamaa, A., Tall, J., Varamäki, E., Singer, S. and Durst, S., eds. 2015. *Business Transfer Ecosystems and Awareness raising activities. Situation analysis of Five European countries*. Seinäjoki: Seinäjoki University. pp. 96-111.
- Durst, S., Poutanen, P. (2013) Success factors of innovation ecosystems: Initial insights from a literature review. *CO-CREATE 2013: The Boundary-Crossing Conference on Co-Design in Innovation, Aalto University*, pp. 27-38.
- Duvander, A. (2001). Do Country-Specific Skills Lead to Improved Labor Market Positions? *Work & Occupations*, 28(2), pp. 210-233.
- EEA (1999). *Environment in the European Union at the turn of the century, Report nr 2*. Copenhagen: European Environment Agency.
- Esping-Andersen, G. (1999). *Foundations of Postindustrial Economies*. Oxford: Oxford University Press.
- Evans, D. and Boyan, J. (1989). An Estimated Model of Entrepreneurial Choice under Liquidity Constraints. *Journal of Political Economy*, 97(4), pp. 808-827.
- Evans, D. and Leighton, L. (1989). Some Empirical Aspects of Entrepreneurship. *American Economic Review*, 79(3), pp. 519-535.
- Fairlie, R. and Meyer, B. (1996). Ethnic and Racial Self-Employment Differences and Possible Explanations. *Journal of Human Resources*, 31.
- Feldman, M. and Florida, R. (1994). The Geographic Sources of Innovation: Technological Infrastructure and Product Innovation in the United States. *Annals of the Association of American Geographers*, 84(2), pp. 210-229.
- Frenkel, A., Maital, S. (2014). *Mapping National Innovation Ecosystems: Foundations for Policy Consensus*. London: Edward Elgar Publishing.
- Fridlund, B. and Hildingh, C. (2000). Rehabilitering efter akut hjärtinfarkt. In: E. Billing. *Psykosociala perspektiv på kranskärlssjukdom*. Lund: Studentlitteratur. pp. 114-136.
- Företagarna (2011). Hur klarar företagen generations-växlingen? *Företagarna*, [online] March. Available at <www.foretagarna.se/Opinion/Rapporter/2011/Hur-klarar-foretagen-generationsvaxlingen> [Accessed on May 20 2016].
- GEM Consortium 2004. *Global Entrepreneurship Monitor 2003*. Babson Park, MA: Babson College.

Gertler, M. (2003). Tacit knowledge and the economic geography of context, or the indefinable tacitness of being (there). *Journal of Economic Geography*, 3(1), pp. 75-99.

Gold, S. (1992). *Refugee communities: A comparative field study*. Newbury Park: Sage.

Goodman, H. (2001). In-depth interviews. *The handbook of social work research methods*. Thousand Oaks: Sage Publications. pp. 309-319.

Graneheim, U. and Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measure to achieve trustworthiness. *Nurse Education Today*, 24, pp. 105-112.

Habib, H. (1999). *Från invandrarföretagsamhet till generell tillväxtdynamik. Invandrare som företagare. För lika möjligheter och ökad tillväxt*. Stockholm: Kulturdepartement.

Hammarstedt, M. (2001). *Making a Living in a New Country*. Växjö: Växjö.

Hammarstedt, M. (2004). Self-employment among immigrants in Sweden: an analysis of intragroup differences. *Small Business Economics*, 23 (2), pp. 115-126.

Hauff, E. and P. Vaglum (1993) 'Integration of the Vietnamese into the Norwegian labour market: the impact of war trauma', *International Migration Review*, 27(2): 388-405.

Ingram, C. and Teigland, R. (2013). *Crowdfunding Among IT Entrepreneurs in Sweden: A Qualitative Study of the Funding Ecosystem and IT Entrepreneurs' Adoption of Crowdfunding*.

Innes, J. and Booher D. (1999). Consensus Building and Complex Adaptive Systems: A Framework for Evaluating Collaborative Planning. *Journal of the American Planning Association*, 65 (4), pp. 412-423.

Isaksen, A. (2001). Building Regional Innovation Systems: Is Endogenous Industrial Development Possible in the Global Economy? *Canadian Journal of Regional Science*, 1, pp. 101-120.

Isenberg, D. (2010). How to start an entrepreneurial revolution. *Harvard Business Review*, 88(6), pp. 40-50.

Isenberg, D. (2011). *The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship*.

Jacobsen, B. (2015). Sweden considers cutting development aid budget by 60% due to refugee crisis. *EurActiv*, [online] 05 November. Available at <www.euractiv.com> [Accessed on May 22 2016].

Johansson, F. (2006). *The medici effect*. Massachusetts: Harvard Business School Publishing.

Khosravi, S. (1999). Displacement and entrepreneurship: Iranian small businesses in Stockholm. *Journal of Ethnic and Migration Studies*, 25(3), pp. 493-508.

- Kihlstrom, R. and Laffont, J. (1979) A general equilibrium entrepreneurial theory of firm formation based on risk aversion. *Journal of Political Economy*, 719–748.
- Klosterman, R. and Rath, J. eds. (2001). *Immigrant Entrepreneurs in Advanced Economies: Mixed Embeddedness Further Explored. Journal of Ethnic and Migration Studies, Special Issue on Immigrant Entrepreneurship*, 27 (2).
- Kunz, E. (1981). Exile and Resettlement: Refugee Theory. *International Migration Review*, 15(1), pp. 42-51.
- Le Grand, C. and Ryszard, S. (1999). Invandrares löner i Sverige. Betydelse av vistelsetid, invandringsland och svensk skolgång. *Arbetsmarknad och Arbetsliv*, 5(2), pp. 89-10.
- Light, I. (1972). *Ethnic Enterprise in America: Business and Welfare among Chinese*. London: University of California Press Berkley and Los Angeles.
- Light, I. (1984). Immigrant end Ethnic Enterprise in North America. *Ethnic and Racial Studies*, 7, pp. 195-216.
- Lindh, T. and Ohlsson, H. (1996). Self-Employment and Windfall Gains: Evidence from the Swedish Lottery. *Economic Journal*, 106(439), pp. 1515-1526.
- Lundh, C., Bennich-Björkman, L., Ohlsson, R., Pedersen, P. and Rooth, D. (2002). *Arbete? Vad god dröj! Invandrare i välfärdssamhället*. Stockholm: SNS Förlag.
- Lundh, C., Ohlsson, R. and Bengtsson, T. eds. (1994). *Immigration and Economic Change. Population, Economy and Welfare in Sweden*. Berlin: SpringerVerlag.
- Marcotte, C. (2014). Entrepreneurship and innovation in emerging economies: conceptual, methodological and contextual issues. *Int. J. Entrep. Behav.* 20 (1), pp. 42–65.
- Mason, C. & Brown, R. (2014) Entrepreneurial ecosystems and growth oriented entrepreneurship. In: *Workshop organised by the OECD LEED Programme and the Dutch Ministry of Economic Affairs on Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship*. The Hague, Netherlands.
- Mercan, B. and Göktas, D. (2011). Components of Innovation Ecosystems: A Cross-Country Study. *International Research Journal of Finance and Economics*, 76.
- Menjívar, C. (1993). History, Economy and Politics: Macro and micro-level factors in recent Salvadorean migration to the US. *Journal of Refugee Studies*, 6(4), pp. 351-371.
- Migrationsverket (2016). Nearly 163,000 people sought asylum in Sweden in 2015. *Migrationsverket*, [online] 12 January. Available at <www.migrationsverket.se> [Accessed on May 20 2016].
- Miles, M. and Huberman, A. ed. (1994). *Qualitative Data Analysis*. Thousand Oaks, CA: Sage Publications.

- Najib, A. (1994). *Immigrant small businesses in Uppsala: disadvantage in labour market and success in small business activities*. Uppsala: Uppsala University.
- Oh, D. S., Phillips, F., Park, S. and Lee, E. (2016). *Innovation ecosystems: A critical examination*. Technovation.
- Ohlsson, H., Broomé, P. and Bevelander, P. (2010). *The Self-Employment of Immigrants and Natives in Sweden*. Bonn: IZA.
- Papaioannou, T., Wield, D. and Chataway, J. (2007). Knowledge ecologies and ecosystems? An empirically grounded reflection on recent developments in innovation systems theory. In: *6th International Triple Helix Conference on University-Government-Industry Relations*.
- Peterson, W. (1970). A General Typology of Migration. *Readings in the Sociology of Migration*, Oxford: Pergamon Press, pp. 49- 68.
- Portes, A. eds. (1995). *The Economic Sociology of Immigration, Essays on Networks, Ethnicity and Entrepreneurship*. New York: Russel Sage Foundation.
- Porter, M. (1990). *The competitive advantage of nations*. New York/London: The Free Press.
- Pripp, O. (2001). *Företagande i Minoritet*. Botkyrka: Mangkulturellt Centrum.
- Putnam, R. (2000). *Bowling Alone. The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Putnam, R., Leonardi, R. and Nanetti, R. (1992). *Making Democracy Work. Civic Traditions in Modern Italy*. Princeton, N.J.: Princeton University Press.
- Rabelo, R. and Bernus, P. (2015) A Holistic Model of Building Innovation Ecosystems. In: *15th IFAC Symposium on Information Control Problems in Manufacturing*. Ottawa, Canada.
- Raijman, R. and Tienda, M. (2003). Ethnic foundations of economic transactions: Mexican and Korean immigrant entrepreneurs in Chicago. *Ethnic & Racial Studies*, 26 (5), pp. 783-802.
- Rath, J. (2000). *Immigrant business: The economic, political and social environment*. New York: St. Martin's Press.
- Reese, L., Gallimore, R. and Goldenberg, C. (1999). Job-required literacy, home literacy environments, and school reading: Early literacy experiences of immigrant Latino children. *Selected Papers on Refugee and Immigrant Issues*, 7, pp. 232-269.
- Regalado A. (2013). In innovation quest, regions seek critical mass. *MIT Technology Review*, 116(5) pp. 84–86.
- Rezaei, S. (2002). Invandrerejede virksomheder, In: *AMID Working Paper Series 8*.
- Richmond, A. (1993). The Environment and Refugees: Theoretical and Policy Issues. In: *Meetings of the International Union for the Scientific Study of Population*. August, Montreal.

Saxenian, A. (1999). *Silicon Valley's new immigrant entrepreneurs*, San Francisco: Public Policy Institute of California.

Saxenian, A., Lee, C., Miller, W. and Rowen, H., eds. (2000). *Networks of immigrant entrepreneurs. In The Silicon Valley edge: A habitat for innovation and entrepreneurship*. Stanford: Stanford University Press.

Schuetze, H., Antecol, H. and Parker, S. eds. (2007). *Immigration, entrepreneurship and the venture start-up process. The life cycle of entrepreneurial ventures: International handbook series on entrepreneurship*. New York: Springer.

Schück, J. and Olsson, H. (2015). Andersson: Viktigt att inte ha ideologiska låsningar. *Dagens Nyheter*, [online] 29 December. Available at <www.dn.se> [Accessed on April 25 2016].

Scott, K. (1999). *The Immigrant Experience. Changing Employment and Income Patterns in Sweden, 1970-1993*. Lund: Lund University Press.

SISP (2006). Om Inkubatorer och Science Parks. *SISP*, [online]. Available at <www.sisp.se> [Accessed on May 20 2016].

Stam, E. (2015). Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. *European Planning Studies*, 23(9), pp. 1759-1769.

Stockholm County Council, Office of Regional Planning and Urban Transportation (2001). *Regional Development Plan 2001 for the Stockholm Region*, [pdf] Stockholm: Regionplane - och trafikkontoret (RTK). Available at: <www.stockholmsregionen2030.nu> [Accessed on May 07 2016].

Suhrke, A. (1995). Analyzing the Causes of Contemporary Refugee Flows. In: Eurostat. *Causes of International Migration: Proceedings of a workshop*. Luxembourg: Office for the Official Publications of the European Commission. pp. 201- 221.

Sweeney, G. (1987). *Innovation, Entrepreneurs and Regional Development*. London, Pinter.

The Local (2015). Weary asylum seekers choose to leave Sweden. *The Local*, [online] 04 May. Available at <www.thelocal.se/20160504/why-weary-asylum-seekers-are-leaving-sweden> [Accessed on May 20 2016].

Toussaint-Comeau, M. (2005). Self-employed immigrants: An analysis of recent data. *Chicago Fed Letter*, April 2005, Number 2013, pp. 1-4.

Tödtling, F. and Trippel, M. (2005). One size fits all? Towards a differentiated regional innovation policy approach. *Research Policy*, 34(8), pp. 1203-1219.

U.S. Department of Homeland Security (2012). EB-5 Immigrant Investor Program. *U.S. Citizenship and Immigration Services*, [online]. Available at < www.uscis.gov > [Accessed on May 06 2016].

Wadhwa, V., Saxenian, A., Rissing, B., and Gereff, G. (2007). *America's new immigrant entrepreneurs*. Durham: Duke University.

Waldinger, R. (1996). *Still the Promised City? : African Americans and New Immigrants in Post- Industrial New York*. Cambridge: Harvard University Press.

Wauters, B. and Lambrecht, J. (2008). Barriers to refugee entrepreneurship in Belgium: Towards an explanatory model. *Journal of Ethnic and Migration Studies*, 34(6), pp. 895–915.

World Economic Forum, 2013. *Entrepreneurial Ecosystems around the Globe and Company Growth Dynamics*. [pdf] Available at: <www3.weforum.org/docs/WEF_EntrepreneurialEcosystems_Report_2013.pdf> [Accessed on 20 April 2016].

Yuengert, A. (1995). Testing Hypotheses of Immigrant Self-Employment. *The Journal of Human Resources*, 30, pp. 194-204.

Öner, M. and Kunday, Ö. (2015). A study on Schumpeterian and Kirznerian entrepreneurship in Turkey: 2006–2013. *Technological Forecasting & Social Change*, 102 (2016), pp. 62–71.

Appendix

Semi-structured questionnaire for three categories of interview participants

Category	Question themes
Arrived as refugees	<ol style="list-style-type: none">1. Difficulties encountered during start-up phase or job-search and beyond2. How they coped with these barriers, about their integration into Stockholm entrepreneurial ecosystem3. Whether they consider their business/employment a success and why4. Plans for the future
Develop programs targeting refugees	<ol style="list-style-type: none">1. Personal history and that of their organisation2. Difficulties encountered during the project initiation and afterwards3. How they coped with these barriers, about their organisation's integration into Stockholm entrepreneurial ecosystem4. Whether they consider their project a success and why5. Plans for the future
Provide support for entrepreneurs	<ol style="list-style-type: none">1. Agency's objectives2. Needs and barriers for entrepreneurs3. Skills, strengths and weaknesses of refugees4. Integration programs currently offered or not offered5. Plans for the future