

Assessing the entrepreneurial ecosystem of Sweden: a comparative study with Finland and Norway using Global Entrepreneurship Index

Ayman Balawi and Asad Ayoub
*Department of Leadership and Organizational Sciences,
Faculty of Business and Economics, University of Pecs, Pécs, Hungary*

The ecosystem
of
entrepreneurs
of Sweden

165

Received 13 December 2021
Revised 31 March 2022
19 June 2022
Accepted 20 June 2022

Abstract

Purpose – This paper aims to investigate and examines Sweden's overall entrepreneurship performance (ecosystem) by applying the Global Entrepreneurship Index (GEI) while benchmarking the entrepreneurial ecosystem of Sweden with that of Finland and Norway.

Design/methodology/approach – In terms of subindices, pillars and component factors, this research analyzes the entrepreneurial ecosystem of Sweden using the GEI supplemented by the Penalty for Bottleneck (PFB) approach utile for identification of bottlenecks. In addition, the Swedish ecosystem is benchmarked against its Finnish and Norwegian counterparts drawing on data collected between 2015 and 2018.

Findings – Using data drawn from the GEI, Sweden manifests a strong entrepreneurial ecosystem with a GEI score of 72.7 out of 100. However, fledgling start-up skills, insufficient human capital, and slow and erratic growth undercut otherwise solid entrepreneurial aspirations drawing on well-developed institutional variables. On a macrolevel, Sweden evinces greater capacity for entrepreneurship and innovation than either Norway or Finland but, on a microlevel, several discontinuities manifest in terms of subindices, pillars and component factors to the advantage of Norway and/or Finland and, conversely, to the detriment of Sweden.

Practical implications – Policymakers should fund a mix of programs and institute regulatory reforms designed to promote entrepreneurial systemic development in Sweden by remediating entrepreneurial gaps depressing GEI scores. Crucial policy interventions are required to accrete start-up skills and human capital and engender high growth. Incremental funding of 47% over current levels budgeted to buoy entrepreneurial activity are mandated for Sweden to approach its GEI potential.

Originality/value – Insights are derived from extracting data drawn from a new methodology for gauging entrepreneurial activity incorporating individual and institutional variables into a single model that combines PFB and GEI analysis with a view to identifying, through the PFB approach and weak aspects of Sweden's entrepreneurial performance.

Keywords Entrepreneurship ecosystem, Entrepreneurial performance, GEI, Global innovation index, Sweden, Norway, Finland, Benchmarking

Paper type Research paper

Introduction

Sweden is the eighth most competitive country in the world, out of 140 countries (Schwab, 2019). It is also Europe's fourth most competitive economy, and one of the best-performing economies in the world. Sweden is well-known for its excellent business climate, worldwide competitiveness, diversified language capabilities and innovation drive (OCED, 2018).



© Ayman Balawi and Asad Ayoub. Published in *Journal of Business and Socio-economic Development*. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>

Journal of Business and Socio-economic Development
Vol. 2 No. 2, 2022
pp. 165-180
Emerald Publishing Limited
e-ISSN: 2635-1692
p-ISSN: 2635-1374
DOI 10.1108/JBSED-12-2021-0165

This is attributed in great part to the country's free-market economy and highly evolved educational system (Doing Business, 2020). According to a new comparative study of entrepreneurial dynamics, published by Swedish Entrepreneurship Forum 2016 and based on Global Entrepreneurship data, 5% of Swedish adults set up new businesses. Almost 6% have invested in a company started by someone else (Braunerhjelm *et al.*, 2016). Between 1997 and 2018, Sweden has spent more than 3% of its GDP on research and development. Sweden's average rate throughout the period was 3.38%, ranging from 3.14% in 2014 to 3.91% in 2001. In 2018, the country occupied the third place among other countries in spending on research and development (World Bank, 2020).

In 2017, Sweden's GDP grew faster than the Organisation for Economic Co-operation and Development (OECD) average (3.1% versus 2.4%), while GDP per capita grew at a slower rate. According to World Bank (2020), Sweden's GDP grew at an average yearly rate of 4.76% from \$242.4 billion in 2001 to \$537.61 billion in 2020, which accounts for 0.48% of the global economy. Over the last two decades, entrepreneurship policies have evolved. The entrepreneurial intervention has switched from direct engagement on the microlevel with individual entrepreneurs to indirect engagement on the macrolevel with a view to engendering an enabling environment designed to buoy entrepreneurial activity in the entrepreneurial ecosystem (Páger *et al.*, 2016).

Measures of entrepreneurial activities, start-ups and self-employment indicate that Swedish are less active than the average European Union (EU) citizen. In 2017, 8.7% of the working population was self-employed, compared to 13.7% across the EU (OCED, 2018). However, new Swedish entrepreneurs were more likely to report introducing new products or services. During 2013–2017, 32.6% of new Swedish entrepreneurs self-reported introducing new products and services, compared to the EU average of 27.6%. Approximately one-third of the youth indicated that their businesses had introduced new products or services (OCED, 2018). Also, men account for 62.9% of the self-employed in manufacturing and services across all industries, while women account for 37.1%. Specifically, 9.8% of self-employed males and 3.9% of self-employed women have tertiary education (OECD, 2020a).

Innovative policies and entrepreneurship are the prime responsibilities of the Swedish Ministry of Enterprise and Innovation. The general aim of this ministry is to promote and strengthen Swedish competitiveness and build opportunities for more employment in growing enterprises. According to World Bank's Doing Business Survey (2020), the country ranks 10th out of 190 economies. Young firms are more prominent in the Swedish business sector yet, in the last decade, tepid Swedish entrepreneurial activity for start-ups can be discerned. That job destruction rates for young firms have been increasing implying a declining employment share for younger firms. Moreover, most of the job creation by young firms occurs in the expanding service sector. The decline in entrepreneurial activity in Sweden has been assuaged during the last two decades; one vital explanation is the economic reforms implemented in Sweden that mitigated several hurdles to entrepreneurship (Heyman *et al.*, 2019). Entrepreneurship policies in Sweden are devised and implemented with a mainstream approach, with the goal of fostering entrepreneurship and fostering general firm growth. National policy gives priority to innovation and growth at the level of the firm, rather than at the level of the individual entrepreneur. Individuals can be assisted during the start-up phase by means of business counseling and instruction (only marginal financial support is offered). During the 1990s and 2000s, women's entrepreneurship was heavily promoted and supported through the implementation of specialized programs. These programs have ended, and gender equality has replaced them as a pillar of regional growth agreements. Instead, the policy objectives are centered on fostering economic growth and innovation. In this regard, female entrepreneurship in Sweden has steadily increased and garnered significant attention in the Swedish economic scene. According to studies, Swedish administrations have prioritized female entrepreneurship on their political agendas and enacted a number of

programs to increase women's company involvement ([United Nations Conference on Trade and Development \(UNCTAD\), 2011](#)). In recent years, female entrepreneurship in Sweden has steadily increased and received considerable attention from the Swedish business community. Studies indicate that over time, Swedish governments have elevated female entrepreneurship on their political agenda and taken a number of steps to encourage women's engagement in the corporate world. Specifically, a number of activities, such as reform of the national budget to give financial assistance to women entrepreneurs and expenditures in education and research, have been adopted ([UNCTAD, 2011](#)). It is commonly believed that the Swedish government's efforts to investigate and encourage female entrepreneurship are meant to enhance new venture development in the Swedish economy; therefore, female-owned enterprises play an essential role in society beyond job creation and economic growth ([Orhan and Scott, 2001](#)). Thus, facilitating female entrepreneurial activities and aiding women in launching their own firms is regarded as one of the most effective strategies for a nation to foster entrepreneurship in general ([Global Entrepreneurship Monitor \(GEM\), 2001](#)). It has been termed the "woman-friendly state" since Sweden is a welfare state with good child care and great gender equality.

Also, the shift in Sweden's educational system had a substantial effect on the country's high rate of entrepreneurial growth. The interest in entrepreneurship education increased. Midway through the 1990s, Sweden introduced a new education system with an emphasis on entrepreneurship education and the function of education in making Sweden more "entrepreneurial" ([Leffler, 2009](#)). In the preceding two decades, this theory has gained momentum, and in 2011 it was incorporated into the curriculum with the proclamation that "the school should assist children in developing an entrepreneurial mindset" ([Lgr, 2011](#), p. 6). What had been a repeating theme for more than a decade was now institutionalized as something that should be included into every element of life ([Dahlstedt and Fejes, 2017](#)).

The thriving Swedish start-up culture has attracted much worldwide attention, but the nation has a long history of invention. Several factors may explain this, including Sweden's global view export is a significant driving force for Sweden, given its relatively tiny local market. Other aspects include social stability, access to government aid and a high level of equality. The Swedish government agency Vinnova plays a significant role in research. The innovation agency encourages and finances research initiatives in a variety of disciplines, including health, transportation, industrial materials and smart cities. The Knowledge Foundation (KK-stiftelsen) supports research and competence development at university colleges and new universities in Sweden in order to improve the country's competitiveness. Additionally, the Swedish Agency for Economic and Regional Growth (Tillväxtverket) promotes competitiveness and entrepreneurship throughout Sweden (2018). Sweden fosters innovation and entrepreneurship activities through several innovation hubs, for example, the Arctic Business is the world's seventh best innovation incubator; this incubator is linked with the Lule University of Technology, with an emphasis on sustainable development, and its mission is to assist in the creation of new and innovative businesses ([Sweden.se, 2018](#)). Start-ups must go through Arctic Business Incubator and a potential accelerator in order to get substantial amounts of funds. Behaviosec and BioCool are two of the most well-known examples ([Arctic Business, 2022](#)). Also, Inkubera is another innovation incubator and catalyst for individuals who wish to establish creative, thriving businesses. In the previous five years, Inkubera has created forty innovative businesses that have collectively generated approximately \$102 million in revenue. Yobber and BioImpakt are listed as alumni start-ups from this incubator. Each year, Inkubera admits 15 new firms without acquiring any equity or control. These businesses have full access to a network of specialists, consultants, entrepreneurs and other entrepreneurs who are willing to share their enthusiasm, expertise and experience ([Inkubera, 2022](#)).

The paper is structured as follows: a literature review related to the entrepreneurial performance of Sweden. Following that, an analysis using the GEI methodology will be conducted, evaluating all pillars and then, a comparison for entrepreneurial performance with two countries (Finland and Norway). Finally, in conclusion, several recommendations are made to increase Sweden's GEI value by 10%.

Literature review

[Acs and Szerb \(2019\)](#) defined an entrepreneur as a person with the vision to see innovation and the ability to bring it to market. According to their definition, it is clear that most small business owners are not entrepreneurs. Entrepreneurs can work and innovate in all fields and at all levels, regardless of their knowledge, education, age and gender. It is worth noting that entrepreneurs can also convert their visions into reality and overcome any obstacles facing them during the implementation of their ideas. Moreover, it is essential to stress the relationship between entrepreneurship and opportunity; opportunity entrepreneurship positively correlates with economic growth ([Acs and Szerb, 2019](#)). Entrepreneurs are considered the link between invention and commercialization. Also, entrepreneurs may be defined as those who have unique ideas that result in novel products or services, noting that the absence of sufficient funds or intellectual property may not prevent them from achieving their visions and converting their dreams into reality ([Acs and Szerb, 2019](#)).

The debate on the significance and economic prospects of country-level entrepreneurship has been spurred by the trends seen in most economies over the previous decades, such as institutional reforms that support innovations and entrepreneurship and the increasing digitization of the economy ([Acs et al., 2014](#)). In their research, [Lafuente et al. \(2021\)](#) argue that entrepreneurship is a key factor in driving both economic expansion and new product development ([Aghion, 2016](#); [Schumpeter, 2017](#)). The results of entrepreneurship, however, depend on the context in which they develop ([Autio et al., 2014](#)). Therefore, the impact of entrepreneurship on economic outcomes across nations is determined more by the institutional context than by the number of entrepreneurs present in those countries ([Lafuente et al., 2020](#)).

The entrepreneurial ecosystem is defined as a novel way of contextualizing increasingly complex and interconnected social processes ([Acs and Szerb, 2019](#)), noting that a system is an interactive and interdependent group of subsystems that work together to perform or achieve a purpose. An ecosystem also represents a collaborative network that involves dynamic and changing interaction systems and subsystems that have updated their relationships within a specific environment. The core concepts of the entrepreneurial ecosystem stem from well-established literature frames, including the national innovation system ([Freeman, 1995](#)), the cluster-based theory of competitive advantage ([Delgado et al., 2010](#)), regional innovation systems ([Fritsch, 2001](#)) and the national innovative capacity ([Furman et al., 2002](#)). In this regard, it is vital to emphasize that an ecosystem has both a living and a non-living component. Ecosystem services can be referred to as ecosystem management. Business ecosystems consist of subsystems or aggregated pillars into ecosystem systems (subindices) that can be improved to ensure ecosystem-level performance ([Szerb and Trumbull, 2018](#)). The entrepreneurship literature is becoming known as an entrepreneurial theory is based primarily on the entrepreneur. Three critical elements for the analysis of business ecosystems underlie the concept of entrepreneurship systems. First, business is mainly an incentive-based activity directed by agents. Secondly, the particular measures are affected by an institutional framework condition. Third, business ecosystems are made up of many different, complicated parts that work together to make the system work ([Acs and Szerb, 2019](#)).

The word "ecosystem" became widely used in a social science context rather than an ecological one when [Moore \(1993\)](#) emphasized the business ecosystem as the firm's external

environment. Entrepreneurial ecosystems are comparable to industrial districts, hubs and innovation systems in that entrepreneurs and spin-offs are present but not as central as they are in entrepreneurial ecosystems (Stam and Spigel, 2017). Acs *et al.* (2017a, b) argue that entrepreneurial ecosystems evolved from the literature in both corporate strategy and regional development. Further, Cavallo *et al.* (2021) have created a mechanism to measure entrepreneurial environments. In particular, the authors investigated how to measure value creation and value capture techniques from the perspective of a single actor and at the level of an ecosystem using a strategic value network-based methodology. They demonstrate that value-based measurements on entrepreneurial ecosystems give a comprehensive method to assess how ecosystems function, which may aid policymakers, entrepreneurs and all other entrepreneurial ecosystem players in making strategic decisions.

Scholars emphasize the importance of accommodating relationships between institutions and economic players within and across borders since institutional contexts, such as the environment governing entrepreneurship, are defined by the presence of multiple overlapping stakeholders (Acs *et al.*, 2014; Lafuente *et al.*, 2020; Isenberg, 2010). As a result, the concept of an “entrepreneurial ecosystem” has been gaining a lot of attention. Crucial conceptual and methodological discrepancies may be seen between the literature and entrepreneurship, which has been mostly viewed as a side issue. The entrepreneurial ecosystem approach can help bring these disparate schools of thought together by highlighting the importance of “location” and giving a fresh perspective on how the interplay of many actors can effect change at the regional level.

Ecosystems for start-ups are not to-do lists. While there is consensus within the academic literature regarding this ecosystem in terms of describing and identifying its components (e.g. Acs *et al.*, 2014; Spigel, 2017), the discussion on the mechanisms underpinning the ecosystem is still ongoing. In light of this, it is crucial to disentangle the theoretical link between the entrepreneurship ecosystem and economic outcomes, as well as the mechanisms governing the coordination between the various essential components of the ecosystem, in order to appreciate the value of the analysis proposed in this study. The determinants of the entrepreneurial environment (i.e. the social, economic and institutional determinants) do not function independently of one another; therefore, assessing them separately would not be fruitful. The creation of new businesses is not the most important component of becoming an entrepreneur. Instead, spatial heterogeneity, such as institutions and entrepreneurial activity (Brown and Mason, 2017; Prieger *et al.*, 2016), explains the formation of alternative configurations, the efficacy of which can also be case specific, alluding to the networked linkages that determine the ecosystem’s configuration.

In regards to entrepreneurial measurements, Lubbaddeh (2019) analyzed Japan’s entrepreneurial development in relation to that of other developed nations in the area, primarily Hong Kong and Taiwan. The author used the GEI methodology found in the Global Entrepreneurship Index. His research indicated that Japan’s entrepreneurial performance is moderate. Institutional elements such as country risk are where Japan’s entrepreneurial profile shines, while individual variables account for the profile’s precariousness (e.g. population perception and motivation).

Besides, Bate’s (2021) research provides light on the under-discussed topic of comparing and contrasting the entrepreneurial ecologies of the BRICS club nations, with a specific emphasis on South Africa, Brazil and India. The entrepreneurial ecosystems of different nations are compared using indicators like GEI, the Global Competitiveness Index (GCI) and the Index Economic Freedom (IEF). In his findings, the 2018 GEI and Global Competitiveness Index (GCI) both rank China as the leader among the BRICS countries in terms of economic development and the availability of opportunities for start-ups. Contrarily, when compared to Brazil and India, South Africa’s entrepreneurial environment does well on Legatum Prosperity Index (LPI), IEF and GEI. While the former two are superior and on par with one

another, South Africa fares low in start-up skills. This demonstrates that, in comparison to India and Brazil, higher education in South Africa is less successful in preparing the public to be entrepreneurs due to low skill perception. In contrast, Brazil and India rank dead last when it comes to opening their business sectors to foreign competition and absorbing new technologies, respectively (Bate, 2021).

Methodology

This paper draws on data from the GEI in evaluating Sweden's entrepreneurial performance in the context of the country's entrepreneurial ecosystem. Acs *et al.* (2019) defined entrepreneurial ecosystems as dynamic institutionally embedded interaction between entrepreneurial attitudes, abilities and aspirations by individuals, which drives the allocation of resources through the creation and operation of new ventures. The GEI consists of 14 pillars. These pillars contain individual and institutional variables corresponding to entrepreneurship's macro and micro aspects (Bosma and Schutjens, 2011; Acs *et al.*, 2017a, b). GEI is a breakthrough advanced composite indicator in measuring the quality and dynamics of entrepreneurship ecosystems at two levels, national and regional. Also, the GEI consists of several level indices, variables, pillars, subindices and superindex (Acs *et al.*, 2014, 2017a, b).

GEI is a multilevel structure that consists of three main subindices, which are as follows:

- (1) Attitudes: this index is related to how the countries think about entrepreneurship.
- (2) Abilities: this index is related to how entrepreneurs conduct entrepreneurial ventures in terms of required skills to accomplish the work and the extent to which these required skills are available.
- (3) Aspirations refer to the endeavor to establish new businesses capable of generating income and being scaled.

Using an innovative and cutting-edge technique, the GEI amalgamates institutional and individual variables. Besides, the GEI methodology permits the comparison of Sweden with Finland and Norway regarding entrepreneurial performance (Szerb and Trumbull, 2018). Finland and Norway share several similarities with Sweden, including geographic location, level of development, and GDP per capita (World Bank, 2020). Data from GEI provide a basis for identifying the strengths and weaknesses of a country's entrepreneurial performance. In addition, bottleneck methodology (PFB), with the input of GEI data, enables identification of entrepreneurial weak points against which resources can be allocated to achieve remediation.

GEI is an advanced methodology; it focuses on the qualitative aspect of entrepreneurship, while the GEM focuses on the quantitative side. GEI focuses on the quality of enterprises and how such enterprises can add value to the society and country in which they exist (Acs *et al.*, 2017a, b). Moreover, GEI, an advanced tool that considers both the individual and institutional aspects of entrepreneurship, provides a very accurate assessment of the status of the performance of the entrepreneurial ecosystem in any country (Szerb and Trumbull, 2018). With reference to the latter index, the PFB methodology features a mechanism designed to analyze and assess the entrepreneurial ecosystem as aid to identifying the worst performance pillars, which are called bottlenecks (Acs *et al.*, 2014). In helping to identify the weakest points in the system with a view to allocation of resources requisite to improve them, the PFB methodology, if employed correctly, provides a roadmap to improve the overall performance of entrepreneurship in a country. The GEI technique also offers significant advantages in numerous policy-making phases, starting from analysis, planning, implementation and support processes to strengthen particular nations' entrepreneurial capacities. The GEI methodology helps policymakers better (1) understand the nature of

entrepreneurship at the national and supranational (EU) levels and (2) identify important frameworks for entrepreneurial policy. Therefore, the GEI outcome reflects the quality of the entrepreneurial environment of the involved nations.

Sweden's entrepreneurship performance vis-à-vis that of the rest of Europe

This section of the article uses the GEI dataset to evaluate the entrepreneurial ecosystem of Sweden. In the beginning, the elements of the entrepreneurial ecosystem in Sweden are examined in detail with a view to evaluating the entrepreneurial strengths and weaknesses of the country.

Table 1 reveals the value of GEI position for the top 17 European countries, among 73 countries with the three subindices scores.

According to Table 1, Sweden has ranked sixth among 73 countries and third among 17 European countries behind the United Kingdom and Switzerland. The highlighted countries in gray are other Nordic countries (Norway and Finland) that share some similarities and common factors with Sweden. More specifically, Sweden leads these two countries with a GEI score of 72.6, Finland holds the tenth position with 67.4 and Norway, the 19th with a GEI score of 55.8.

Furthermore, Figure 1 below juxtaposes GDP per capita with the value of GEI for Sweden; in regressing the former, as a dependent variable, against latter, as an independent variable, a significant positive coefficient of determination (R^2) manifests confirming Balawi (2021)'s assertion that entrepreneurial ecosystems are critical components of economic success. Further, Sweden's ecosystem performs excellently on all three GEI subindices. Its performance stands above the global trend line in all of the graphs given that the GEI value of Sweden is above the trend lines.

Table 2 below provides additional details regarding the three subindices (Attitudes, Abilities and Aspiration), the 14 pillars, in addition to their scores. Upon observation, institutional variables show very high performance ;12 out of 14 are among the top 25% of counties compared with the individual variables where only 5 pillars out of 14 show high performance. Such results comport with what is expected from a highly developed and

GEI position	Country	ATT	ABT	ASP	GEI score
2	Switzerland	70.35	84.62	85.13	80.03
4	The United Kingdom	72.36	81.71	71.99	75.35
6	Sweden	70.42	78.16	69.39	72.66
8	The Netherlands	78.57	68.43	60.66	69.22
9	France	59.1	68.24	75.8	67.72
10	Finland	78.92	59.77	63.6	67.43
13	Germany	59.41	67.26	70.18	65.62
12	Austria	67.1	66.2	63.7	65.6
15	Belgium	52.6	68.8	66.3	62.6
18	Luxembourg	47.57	64.16	62.72	58.15
19	Norway	66	60.2	41.1	55.8
20	Estonia	61.38	52.88	52.53	55.6
26	Poland	50.18	46.09	49.75	48.68
29	Spain	50.9	48.63	37.76	45.76
32	Slovakia	37.32	39.57	54.17	43.69
37	Latvia	37.47	44.79	40.39	40.88
39	Hungary	30.97	41.53	46.24	39.58
40	Romania	29.5	35.6	44.7	36.6

Table 1.
Sweden's GEI ranking
among 17 European
countries

Source(s): own elaboration based on GEI averages data

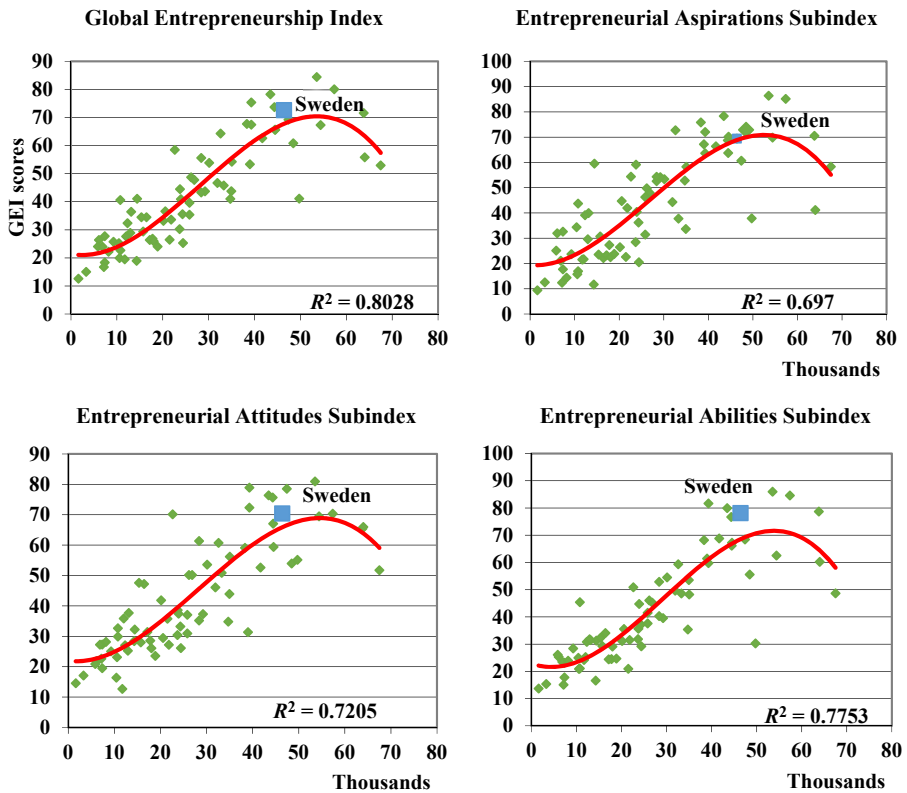


Figure 1.
GDP per capita against
the GEI scores and the
subindices of Sweden

Source(s): Own elaboration based on GEI dataset 2015-2018 averages

innovative country like Sweden to encourage and support entrepreneurship activities (Draghici *et al.*, 2014).

With respect to the majority of the 14 pillars, Swedish performance is exemplary with 10 of the 14 pillars ranking in the top 25% of nations, while the remaining four pillars (start-up skills, risk acceptance, rapid growth and risk capital) have performed less well but remain in the top 50–75% of countries. In this regard, it is worth noting that no pillar lies below this level. The start-up skills and risk acceptance pillars are lower than the other subindex pillars for the attitude subindex. Additionally, it is worth mentioning that the individual variables for the pillars of starting skills (0.41) and cultural supports (0.48) exhibit weak performance. They rank in the bottom 25% of nations.

For the abilities subindex pillars, all have demonstrated superior performance in both institutional and individual variables, except for the human capital pillar, which manifests lower performance in both institutional and individual variables than the other abilities' pillars (Khalilov and Yi, 2021). As for the aspirational subindex pillars, all have shown high performance (top 25% of countries) with the exception of high growth and risk capital. Moreover, the individual variable of process innovation (new technology) and high growth (Gazelle) companies evince lower performance among 25–50% of countries.

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity Perception	0.98	Freedom	0.87	Opportunity Recognition	1.00
	Start-up skills	0.47	Education	0.75	Skill Perception	0.41
	Risk Acceptance	0.72	Country Risk	1.00	Risk Perception	0.49
	Networking	0.73	Connectivity	0.87	Know Entrepreneurs	0.58
	Cultural Support	0.89	Corruption	0.98	Career Status	0.48
	Entrepreneurial Attitudes	70.4				
Entrepreneurial Abilities	Opportunity Startup	0.97	Governance	0.98	Opportunity Motivation	0.87
	Technology Absorption	0.98	Tech Absorption	0.96	Technology Level	0.97
	Human Capital	0.64	Labor Market	0.65	Educational Level	0.81
	Competition	0.85	Competitiveness and Regulation	0.83	Competitors	0.87
	Entrepreneurial Abilities	78.2				
Entrepreneurial Aspirations	Product Innovation	0.71	Technology Transfer	0.93	New Product	0.62
	Process Innovation	0.92	Science	0.97	New Technology	0.51
	High Growth	0.53	Finance and strategy	0.93	Gazelle	0.50
	Internationalization	0.88	Economic complexity	0.96	Export	0.79
	Risk Capital	0.67	Depth of Capital Market	0.90	Informal Investment	0.72
	Entrepreneurial Aspirations	69.4				
GEI	72.7	Institutional	0.90	Individual	0.69	

Source(s): Author's creation based on GEI data 2015-2018 averages

Table 2. Sweden's overall GEI score

Comparative entrepreneurial ecosystem performance: Sweden versus Finland and Norway

For Sweden, Norway and Finland, a 14-pillar benchmarking is carried out in this section. Prefatorily, it behooves to explain the rationale behind choosing these two countries as benchmarks of comparison with Sweden in terms of entrepreneurial performance. These countries are Nordic with similar political economies evincing a high value of GDP per capita: \$46399 (Sweden), \$64008 (Norway) and \$39300 (Finland) (Ács et al., 2011).

The three economies evince a high level of development with a strong focus on innovation. The average GEI score for Sweden was 72.7, whereas the average GEI score for Norway was 55.8. Out of 73 countries, Finland came in tenth place with a GEI of 67.4. The benchmarking shows that Sweden's GEI (2015–2018) value is higher than these two countries. In particular, Sweden has exceeded these two countries in 6 out of the 14 GEI pillars. Sweden evinces outstanding institutional entrepreneurship variables where the vast majority of these variables are within the top 25% of countries.

From Figure 2, it is demonstrable that Sweden has a high performance in opportunity perception, opportunity start-up and technology absorption surpassing Finland and Norway in technology absorption, human capital, competition, product innovation, process innovation and internationalization. On the other hand, the start-up skills and high growth evince the lowest performance among the 14 pillars in Sweden.

In contrast, Finland transcends Sweden and Norway in terms of start-up skills, networking and high growth while trailing the latter two countries in terms of competition and internationalization. The high performance of start-up skills in Finland stems from its high level of education (institutional variable of start-up skills), which reached an optimal value of 1.0. Nevertheless, Norway ranks first in opportunity perception, opportunity start-up, cultural support and risk acceptance but ranks second in internationalization and product innovation.

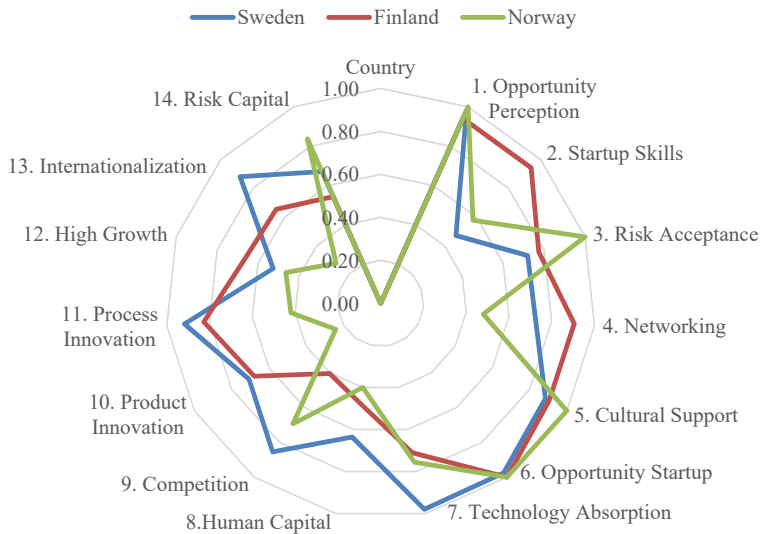


Figure 2. Pillar level comparison of Sweden, Finland and Norway's pillar values

Source(s): Author's creation based on GEI average dataset

The role of policy and governance in fostering entrepreneurial activity

Stam (2015) observes that many nations are transitioning from entrepreneurship policies to policies for entrepreneurial economies often in the guise of ease of doing business in a country. The latter policy framework recognizes that the setting and context in which entrepreneurship takes place may substantially aid or hinder its success. In assessing ease of doing business, World Bank uses the metric of the time required to register and create a new business; the longer that time, the greater the level of deterrence impeding entrepreneurial endeavors.

To put this in perspective, the Doing Business (2020) report rates all Scandinavian economies in OCED in the world's top 25 (World Bank, 2021). For example, the Scandinavian region has one of the lowest corporation tax rates in the EU. According to the World Bank's Doing Business report for 2020, Sweden ranks 10th out of 190 economies in terms of ease of doing business. Entrepreneurship in Sweden receives a fillip from a coterie of several efficient mechanisms to facilitate business creation and operation, including online complaint systems for registration, taxes, property transfer and permits. For instance, Sweden allows a full tax deduction for interest and does not have specific regulations governing thin capitalization (World Bank, 2021).

Moreover, innovation in Sweden benefits from judicious public sector investment in emerging industrial sectors of the economy. The government invests aggressively in biotechnology and food processing industries to spur growth. The government is supportive to trade and aims to help emerging markets such as the Baltic states. The country's primary exports are petroleum products and vehicles. In terms of overall innovation, Sweden consistently scores high on major indices of innovation including Global Innovation Index, the European Innovation Scoreboard, and the Bloomberg Innovation Index.

The government fosters innovation and growth through various agencies and infrastructural expenditures. Sweden spends more than 3% of its GDP on research and innovation and is very active in supporting cross-border technological collaboration. Swedish companies have made significant inroads in pharmaceutical development, biotechnology

technologies and digital tools in the global market. Additionally, the country holds industrial niches in biomaterials, orthopedic implants, medical imaging and visualization, and regenerative medicine (Hall and Wagner, 2012; OECD, 2020b).

Policy recommendations

Several bottlenecks in the entrepreneurial ecosystem of Sweden have been identified in this paper that need immediate intervention and extensive funding to address. The recommended policy initiatives that hold potential to enhance Sweden’s GEI by 10% are summarized in Table 3.

In employing the PFB approach, an essential feature of GEI, the most vulnerable links in the ecosystem can be laid bare with a view to targeting enhancements in entrepreneurial pillars that hold a promise to reap increasing returns to GEI scores for a given level of investment. The approach assumes that entrepreneurship performance depends on the weakest (poorest performance) pillars (Ács et al., 2011). The table below shows Sweden’s bottleneck pillars and the quantum of improvement needed, in terms of allocated resources, to attain an increase in the GEI value of the entrepreneurial pillars in Sweden’s ecosystem.

According to Table 3, salient bottleneck pillars congregate around start-up skills, human capital, high growth and risk capital. To increase the GEI of Sweden by 10%, the following actions are needed:

The start-up skills pillar consists of skill perception and education. The values of these variables are (0.47) and (0.75), respectively. Acs and Szerb (2019) describe start-up skills as “the perception of start-up skills in the population and weights this aspect with the quality of education” (p. 28). This pillar can be improved in Sweden by promoting postsecondary education. That can be achieved by designing curricula to improve entrepreneurial skills among would-be entrepreneurs. A premium should be placed on hiring qualified trainers who, having themselves entrepreneurial experience, can transfer their best practice to these new entrepreneurs (Karlsson and Moberg, 2013).

Furthermore, the human capital pillar consists of the labor market and educational level. The values of these variables are 0.65 and 0.81, respectively. Taking this into consideration, it is proposed that additional resources be directed to the labor market due to its low value, albeit the institutional variable of the labor market has two components (labor freedom and staff training) (Karlsson and Moberg, 2013; Acs and Szerb, 2019), one of which, labor freedom, cannot be ameliorated purely by additional resources.

However, Sweden can invest more in the training of the national labor force to endow all workers with technology-driven skills since that, perforce, impacts business development and innovation. To further facilitate new business formation, the state ought to streamline and simplify the regulatory environment through the simplification of the laws that control the activities of entrepreneurship and the introduction of new laws that contributes to the transparency in the implementation of legislation. Furthermore, it is critical to repeal any laws that are no longer relevant or necessary. In this regard, insisting on extensive use of IT to lessen administrative burden in regulations relating to entrepreneurship activities is critical.

Pillar	Incremental resource allocation	GEI increase
Start-up skills	47%	0.22
High growth	36%	0.17
Human capital	13%	0.06
Risk capital	4%	0.02

Source(s): Author’s creation based on GEI average dataset

Table 3.
The bottleneck pillars

The high growth pillar consists of finance and strategy and high growth “Gazelle” companies (Acs and Szerb, 2019). The values of these variables are 0.93 and 0.50, respectively. The Gazelle variable is the percentage of high-growth enterprises that expect to hire at least ten people and develop at a rate of more than 50% in the next five years (Acs and Szerb, 2019; Balawi, 2021). Concerning this, the score on Gazelle is low and that depresses the total value of the high growth pillar. Lastly, the risk capital pillar consists of the depth of capital and informal investment. The values of these variables are 0.90 and 0.72, respectively. Informal investors, such as family members, friends or private investors, contribute to start-up company financing. In this context, more support and resources are to be allocated to encourage people involved in informal investment to increase the value of this type of business, which can be done through providing suitable education to those investors and simplifying the laws which govern such types of investment. That will improve the performance of this individual variable and, consequently, will enhance the performance of the risk capital pillar.

According to the conducted comparison between the three countries, many lessons can be learned from Norway and Finland. It is noteworthy that each of these countries has an advanced rank according to the GEI index, and they also surpassed Sweden in some pillars. Finland has a high score in start-up skills and networking pillars, and it surpassed the other two countries in these previously mentioned pillars. Finland is a safe place to start a business. It is an attractive place to put innovative technology to the test. Finland has highly educated and tech-savvy individuals, a reliable testing infrastructure and the best digital technology knowhow (Business Finland, 2022). On the other hand, Norway has high scores in the risk acceptance and cultural support pillars. There are numerous advantages to doing business in Norway, including the high level of education, excellent productivity and a long-standing innovation culture (Oslo Business, 2022). Norway’s economy is among the most powerful in the world. The people who make up an entrepreneurial ecosystem, as well as the culture of trust and collaboration that allows them to work together successfully, are at the heart of it. As well, a wave of Norwegian enterprises has penetrated local and worldwide markets, aided by a healthy ecosystem of coworking spaces, accelerators, incubators, hubs, investors and support funds. Entrepreneurs in Norway can rapidly locate what they need at each stage of growth due to an ecosystem that allows for the free flow of people, information and resources. The most vital things are knowledge development, innovation, technology and keeping the economy going (Road, 2022). Norway should focus on the integration of market orientation and globalization into the heart of the business model. This is essential for providing better business development skills and facilitating the expanding availability of high-quality public and private risk capital (Frimanslund, 2022). Also, the increasing availability of resources and assistance, and inspiring and supportive ecosystems, networks, and communities for entrepreneurs to boost their businesses (Startup Universal, 2021).

Conclusion

With a view to identifying where immediate policy intervention is warranted, this paper overviews the entrepreneurial ecosystem of Sweden in terms of its present condition within the framework of the GEI. The GEI presents a multidimensional encapsulation of entrepreneurship by integrating individual and institutional factors in order to determine the ecosystem’s strengths and limitations. Particularly from a policy-making perspective, the PFB technique provides added insight to GEI by identifying a country’s weakest pillars; for Sweden, these gap areas span start-up skills, human capital and high growth. Ranked sixth on the GEI, Sweden boasts a GEI score of 72.7. That its GEI score and subindices substantially exceed global average scores elevates Sweden to the ranks of the most innovative economies.

In terms of GEI pillars, Sweden ranks highest in 9 out of 14, establishing the nation among the top countries in each. However, subindex bottlenecks in start-up skills serve as a drag on its overall GEI. Furthermore, the GEI performance level varies according to institutional and individual characteristics. Sweden does better on institutional measures than on individual measures with the average value for institutional variables at 0.90 as compared to that of 0.69 for individual variables. Individual factors within the entrepreneurial attitudes subindex, including skill perception and career status, are the primary issue areas that require the government's undivided focus to increase the country's overall entrepreneurial capabilities. These findings suggest that greater return to scale in public investment can be realized by targeting individual rather than institutional characteristics in programs of improvement.

Comparing Sweden's performance to that of the other two countries in the Nordic region (Norway and Finland) revealed notable discontinuities. After analyzing the 14 pillars of GEI, it was found that Sweden surpassed both countries in 6 out of the 14 pillars. In contrast, these two countries shared performance superiority in other pillars. In more detail, Sweden is a market leader in internationalization and technology absorption. Opportunity perception and opportunity start-up are the best performing pillars in all the countries. Still, process and product innovation are the poorest performing pillars in Norway, and competition is the worst performing pillar in Finland. Nevertheless, all three nations continue to face substantial bottlenecks in terms of human capital and high growth. By and large, Norway lags behind comparable average performers in the category of innovation economies.

In conclusion, policy intervention must address current bottlenecks, most notably increasing human capital. Above all, the Swedish government must incrementally invest in augmenting performance in start-up skills at 47% of the resources allocated. Other areas earmarked for investment yielding increasing returns to entrepreneurial activity range from 17% for high growth, 6% for human capital and 2% for risk capital. In addition, that Sweden must undertake a range of structural changes to strengthen its an entrepreneurial environment to host and attract entrepreneurs (Hessels *et al.*, 2008).

As a limitation, the GEI data included in the analysis span only a limited range of years, 2015–2018. More temporally extensive data would be utile particularly in a gauging *ex ante/ex poste* effects of policy changes instituted as well as the effects of sustained public investment designed to enhance one or more pillars.

References

- Acs, Z.J. and Szerb, L. (2019), *The Global Entrepreneurship Index (GEINDEX)*, Vol. 24, Now Publishers, Boston.
- Ács, Z.J., Rappai, G. and Szerb, L. (2011), "Index-building in a system of interdependent variables: the penalty for bottleneck", GMU School of Public Policy Research Paper, 2011-24, doi: [10.2139/ssrn.1945346](https://doi.org/10.2139/ssrn.1945346).
- Ács, Z.J., Autio, E. and Szerb, L. (2014), "National systems of entrepreneurship: measurement issues and policy implications", *Research Policy*, Vol. 43 No. 3, pp. 476-494, doi: [10.1016/j.respol.2013.08.016](https://doi.org/10.1016/j.respol.2013.08.016).
- Acs, Z.J., Szerb, L. and Lloyd, A. (2017a), *Global Entrepreneurship and Development Index 2017*, Springer Briefs in Economics, Cham. doi: [10.1007/978-3-319-65903-9](https://doi.org/10.1007/978-3-319-65903-9).
- Acs, Z.J., Stam, E., Audretsch, D.B. and O'Connor, A. (2017b), "The lineages of the entrepreneurial ecosystem approach", *Small Business Economics*, Vol. 49 No. 1, pp. 1-10.
- Aghion, P. (2016), "Entrepreneurship and growth: lessons from an intellectual journey", *Small Business Economics*, Vol. 48 No. 1, pp. 9-24, doi: [10.1007/s11187-016-9812-z](https://doi.org/10.1007/s11187-016-9812-z).
- Arctic Business (2022), available at: <https://www.abi.se/about-us/> (accessed 5 June 2022).

- Autio, E., Kenney, M., Mustar, P., Siegel, D. and Wright, M. (2014), "Entrepreneurial innovation: the importance of context", *Research Policy*, Vol. 43 No. 7, pp. 1097-1108, doi: [10.1016/j.respol.2014.01.015](https://doi.org/10.1016/j.respol.2014.01.015).
- Balawi, A. (2021), "Entrepreneurship ecosystem in the United Arab Emirates: an empirical comparison with Qatar and Saudi Arabia", *International Entrepreneurship Review*, Vol. 7 No. 2, pp. 55-66, doi: [10.15678/IER.2021.0702.05](https://doi.org/10.15678/IER.2021.0702.05).
- Bate, A.F. (2021), "A comparative analysis on the entrepreneurial ecosystem of BRICS club countries: practical emphasis on South Africa", *SN Business and Economics*, Vol. 1 No. 10, doi: [10.1007/s43546-021-00120-2](https://doi.org/10.1007/s43546-021-00120-2).
- Bosma, N. and Schutjens, V. (2011), "Understanding regional variation in entrepreneurial activity and entrepreneurial attitude in Europe", *The Annals of Regional Science*, Vol. 47 No. 3, pp. 711-742.
- Braunerhjelm, P., Larsson, J., Thulin, P. and Skoogberg, Y. (2016), "The entrepreneurial challenge - a comparative study of entrepreneurial dynamics in China, Europe and the US", available at: https://entreprenorskapsforum.se/wp-content/uploads/2016/06/GEM_Internationell_Rapport_2016_Webb.pdf (accessed June 2022).
- Brown, R. and Mason, C. (2017), "Looking inside the spiky bits: a critical review and conceptualisation of entrepreneurial ecosystems", *Small Business Economics*, Vol. 49 No. 1, pp. 11-30, doi: [10.1007/s11187-017-9865-7](https://doi.org/10.1007/s11187-017-9865-7).
- Business Finland (2022), "Finnish startup environment", available at: <https://www.businessfinland.fi/en/do-business-with-finland/startup-in-finland/startup-environment> (accessed 17 June 2022).
- Cavallo, A., Ghezzi, A. and Sanasi, S. (2021), "Assessing entrepreneurial ecosystems through a strategic value network approach: evidence from the San Francisco Area", *Journal of Small Business and Enterprise Development*, Vol. 28 No. 2, pp. 261-276, doi: [10.1108/jsbed-05-2019-0148](https://doi.org/10.1108/jsbed-05-2019-0148).
- Dahlstedt, M. and Fejes, A. (2017), "Shaping entrepreneurial citizens: a genealogy of entrepreneurship education in Sweden", *Critical Studies in Education*, Vol. 60, pp. 462-476, doi: [10.1080/17508487.2017.1303525](https://doi.org/10.1080/17508487.2017.1303525).
- Delgado, M., Porter, M.E. and Stern, S. (2010), "Clusters and entrepreneurship", *Journal of Economic Geography*, Vol. 10 No. 4, pp. 495-518.
- Doing Business - Economy Profile (Sweden) (2020), "Doing business", available at: <https://www.doingbusiness.org/content/dam/doingBusiness/country/s/sweden/SWE.pdf> (accessed 4 June 2022).
- Draghici, A., Albulescu, C.T. and Tamasila, M. (2014), "Entrepreneurial attitude as knowledge asset: its impact on the entrepreneurial activity in Europe", *Procedia-Social and Behavioral Sciences*, Vol. 109, pp. 205-209.
- Freeman, C. (1995), "The 'national system of innovation' in historical perspective", *Cambridge Journal of Economics*, Vol. 19 No. 1, pp. 5-24.
- Frimanslund, T. (2022), "Financial entrepreneurial ecosystems: an analysis of urban and rural regions of Norway", *International Journal of Global Business and Competitiveness*, Vol. 17, pp. 24-39, doi: [10.1007/s42943-022-00050-2](https://doi.org/10.1007/s42943-022-00050-2).
- Fritsch, M. (2001), "Co-operation in regional innovation systems", *Regional Studies*, Vol. 35 No. 4, pp. 297-307.
- Furman, J.L., Porter, M.E. and Stern, S. (2002), "The determinants of national innovative capacity", *Research Policy*, Vol. 31 No. 6, pp. 899-933.
- Global Entrepreneurship Monitor (GEM) (2001), *Global Entrepreneurship Monitor*, Babson College, Boston, MA.
- Hall, J. and Wagner, M. (2012), "The challenges and opportunities of sustainable development for entrepreneurship and small business", *Journal of Small Business and Entrepreneurship*, Vol. 25 No. 4, pp. 409-416.

- Hessels, J., Gelderen, M. and Thurik, R. (2008), "Drivers of entrepreneurial aspirations at the country level: the role of start-up motivations and social security", *International Entrepreneurship and Management Journal*, Vol. 4 No. 4, pp. 401-417.
- Heyman, F., Norbäck, P.-J., Persson, L. and Andersson, F. (2019), "Has the Swedish business sector become more entrepreneurial than the US business sector?", *Research Policy*, Vol. 48 No. 7, pp. 1809-1822, doi: [10.1016/j.respol.2019.04.007](https://doi.org/10.1016/j.respol.2019.04.007).
- Inkubera (2022), "Growth is no coincidence", *Inkubera*, available at: <https://www.inkubera.se/english/> (accessed 5 June 2022).
- Isenberg, D.J. (2010), "How to start an entrepreneurial revolution", *Harvard Business Review*, Vol. 88 No. 6, pp. 40-50.
- Karlsson, T. and Moberg, K. (2013), "Improving perceived entrepreneurial abilities through education: exploratory testing of an entrepreneurial self-efficacy scale in a pre-post setting", *The International Journal of Management Education*, Vol. 11 No. 1, pp. 1-11.
- Khalilov, L. and Yi, C.-D. (2021), "Institutions and entrepreneurship: empirical evidence for OECD countries", *Entrepreneurial Business and Economics Review*, Vol. 9 No. 2, pp. 119-134.
- Lafuente, E., Acs, Z.J., Sanders, M. and Szerb, L. (2020), "The global technology Frontier: productivity growth and the relevance of Kirznerian and Schumpeterian entrepreneurship", *Small Business Economics*, Vol. 55, pp. 153-178, doi: [10.1007/s11187-019-00140-1](https://doi.org/10.1007/s11187-019-00140-1).
- Lafuente, E., Ács, Z.J. and Szerb, L. (2021), "A composite indicator analysis for optimizing entrepreneurial ecosystems", *Research Policy*, 104379, doi: [10.1016/j.respol.2021.104379](https://doi.org/10.1016/j.respol.2021.104379).
- Leffler, E. (2009), "The many faces of entrepreneurship: a discursive battle for the school arena", *European Educational Research Journal*, Vol. 8, pp. 104-116, doi: [10.2304/eeerj.2009.8.1.104](https://doi.org/10.2304/eeerj.2009.8.1.104).
- Lgr, I. (2011), *Läroplan För Grundskolan, Förskoleklassen Och Fritidshemmet*, Skolverket, Stockholm.
- Lubbadeh, T. (2019), "Entrepreneurship development in Japan: an empirical analysis", *International Entrepreneurship Review*, Vol. 5 No. 3, pp. 19-33, doi: [10.15678/ier.2019.0503.02](https://doi.org/10.15678/ier.2019.0503.02).
- Moore, J.F. (1993), "Predators and prey: a new ecology of competition", *Harvard Business Review*, Vol. 71 No. 3, pp. 75-86.
- OCED (2018), "Inclusive entrepreneurship policies: country assessment notes (Sweden)", *Organisation for Economic Co-operation and Development. OECD*, available at: <https://www.oecd.org/cfe/smes/SWEDEN-IE-Country-Note-2018.pdf> (accessed 5 June 2022).
- OECD (2020a), "Self-employed with tertiary education (indicator)". doi: [10.1787/2d36fdbbe-en](https://doi.org/10.1787/2d36fdbbe-en) (accessed 5 June 2022).
- OECD (2020b), "Statistics – Sweden", available at: www.oecd.org/science/emerging-tech/biotechnologystatistics-sweden.htm (accessed 13 November 2021).
- Orhan, M. and Scott, D. (2001), "Why women enter into entrepreneurship: an explanatory model", *Women in Management Review*, Vol. 16 No. 5, pp. 232-247, doi: [10.1108/09649420110395719](https://doi.org/10.1108/09649420110395719).
- Oslo Business (2022), "Oslo's startup ecosystem", available at: <https://oslobusinessregion.no/ecosystem> (accessed 17 Jun 2022).
- Páger, B., Szerb, L. and Komlósi, É. (2016), "Measuring entrepreneurship and optimizing entrepreneurship policy efforts in the European Union", *CESifo DICE Report*, Vol. 14 No. 3, pp. 8-23.
- Prieger, J.E., Bampoky, C., Blanco, L.R. and Liu, A. (2016), "Economic growth and the optimal level of entrepreneurship", *World Development*, Vol. 82, pp. 95-109, doi: [10.1016/j.worlddev.2016.01.013](https://doi.org/10.1016/j.worlddev.2016.01.013).
- Road, R. (2022), "What are entrepreneurial ecosystems?", available at: [www.kauffman.orghttps://www.kauffman.org/ecosystem-playbook-draft-3/ecosystems/](https://www.kauffman.org/https://www.kauffman.org/ecosystem-playbook-draft-3/ecosystems/) (accessed June 2022).
- Schumpeter, J.A. (2017), *The Theory of Economic Development an Inquiry into Profits, Capita I, Credit, Interest, and the Business Cycle*, Routledge.
- Schwab, K. (2019), "The global competitiveness report 2019", *World Economic Forum*, available at: https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf (accessed June 2022).

- Spigel, B. (2017), "The relational organization of entrepreneurial ecosystems", *Entrepreneurship Theory and Practice*, Vol. 41 No. 1, pp. 49-72, doi: [10.1111/etap.12167](https://doi.org/10.1111/etap.12167).
- Stam, E. (2015), "Entrepreneurial ecosystems and regional policy: a sympathetic critique", *European Planning Studies*, Vol. 23 No. 9, pp. 1759-1769.
- Stam, E. and Spigel, B. (2017), "Entrepreneurial ecosystems", in Blackburn, R., De Clercq, D., Heinonen, J. and Wang, Z. (Eds), *Sage Handbook for Entrepreneurship and Small Business*, in press.
- Startup Universal (2021), "Startup universal | Norway startup ecosystem country guide", available at: <https://startupuniversal.com/country/norway/#title-intro> (accessed 18 June 2022).
- Sweden.se (2018), "Innovation in Sweden", available at: <https://sweden.se/work-business/business-in-sweden/a-country-of-innovation> (accessed 5 June 2022).
- Szerb, L. and Trumbull, W. (2018), "Entrepreneurship development in Russia: is Russia a normal country? An empirical analysis", *Journal of Small Business and Enterprise Development*, Vol. 25 No. 6, pp. 902-929, doi: [10.1108/jsbed-01-2018-0033](https://doi.org/10.1108/jsbed-01-2018-0033).
- United Nations Conference on Trade and Development (UNCTAD) (2011), "Women's entrepreneurship and innovation- country report- Sweden", Organisation for Economic Co-operation and Development, The United Nations Conference on Trade and Development (UNCTAD), available at: <https://data.oecd.org/entrepreneur/young-self-employed.htm#indicator-chart> (accessed 5 June 2022).
- World Bank (2020), Sweden, available at: <https://data.worldbank.org/country/SE> (accessed 13 November 2021).
- World Bank (2021), "Ease of doing business rankings", available at: <https://www.doingbusiness.org/en/rankings?region=oced-high-income> (accessed 8 November 2021).

About the authors

Ayman Balawi, PhD Candidate in Business Administration at the University of Pécs (Hungary); Master's in business administration from Birzeit University, Palestine. Bachelor of Electronics Engineering with a minor in physics from Palestine Polytechnic University, Palestine. His research interests include investigating the relationship between transformational and transactional leadership and their impacts on innovation. Also, he is interested in entrepreneurship, HRM and social media marketing. Ayman Balawi is the corresponding author and can be contacted at: aymanalb2004@gmail.com

Asad Ayoub, PhD candidate in Business Administration at the University of Pécs (Hungary). Master's in business administration from German Jordanian University, Jordan. Bachelor of Electrical Engineering with a minor in communication and electronics from Jordan University of science and technology, Jordan. His research interests include the relationship between emotional intelligence and job performance and job satisfaction.