

A satellite map of Nova Scotia, Canada, serves as the background for the report cover. The map shows the green, forested land of the province, its numerous islands, and the surrounding dark blue waters of the Atlantic Ocean. The coastline is highly irregular with many inlets and bays.

Nova Scotia's Entrepreneurial Ecosystem

A Global Entrepreneurship Monitor (GEM)
Entrepreneurial Ecosystem Report

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Cover Photo: Jacques Descloitres, MODIS Rapid Response Team, NASA/GSFC, October 2003

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EXECUTIVE SUMMARY

The Global Entrepreneurship Monitor (GEM) Ecosystem Index (ESI) was applied to Nova Scotia, Canada to evaluate the ecosystem in 2019 using the Stam (2015) model based on 10 pillars that make up the quality of any ecosystem. The results indicated that Nova Scotia constitutes a developing ecosystem that enjoys several strengths and that Nova Scotia is positioned competitively within the ranking of the Canadian ecosystems considered in 2019 (i.e., Alberta and Montreal).

Ecosystem Pillars

The evaluation of each of the 10 pillars that detail Nova Scotia's ecosystem are as follows:

Networking

The networking pillar had the highest overall score of 7.18. The component scores point to a vibrant community of entrepreneurs helping each other and providing mentorship and support within their communities.

Culture

The culture pillar received the second highest score (6.73). Culture is one of the strengths of Nova Scotia's ecosystem. Entrepreneurs are viewed in a positive light and there is support for promoting entrepreneurial activity.

Talent

Talent also featured as one of the strengths of the Nova Scotia ecosystem (6.72), receiving the third highest score. However, talent retention in the province remains challenging.

Physical Infrastructure

The physical infrastructure pillar received the fourth highest score (6.62). The disparity in responses between nascent entrepreneurs and owner-managers suggests that access to physical infrastructure is not the same for everyone.

Demand

The demand pillar received the fifth highest score (6.48). This pillar indicates strong local demand for innovative products and services; however, accessing markets outside the region is slightly more challenging.

Knowledge

The knowledge pillar was the sixth highest scoring pillar (6.46). While nascent entrepreneurs

attributed their success, in part, to the knowledge exchanges provided in the region, established business entrepreneurs attributed less of their success to this factor.

Support Services

The strength of the support services pillar was driven by the support provided to entrepreneurs during the start-up phase (6.17). There are potential deficits in support services for established businesses and a perception that Nova Scotia lacks a central impartial agency that serves as the first point of contact for entrepreneurs.

Finance

The finance pillar was one of the weaker pillars, tied for the second lowest score (6.00), suggesting that this pillar needs further development. However, on closer inspection, it is the comparison of informal investment in Nova Scotia to the national average that is contributing to the overall low score, when a regional comparison might be more appropriate.

Formal Institutions

The formal institutions pillar was tied for the second lowest performing pillar (6.00). Despite high quality support being provided, challenges around 'red tape' dominate the discussion.

Leadership

The leadership pillar had the lowest score of all the pillars (5.99), suggesting that this is the area in the ecosystem on which Nova Scotia needs to work the most. Challenges mainly arise around the role of mentoring for established businesses.



Recommendations

The overall Ecosystem Index (ESI) for Nova Scotia was 6.40, which compares favourably to other Canadian provinces like Alberta (6.41) but is slightly under the municipal score for Montreal (6.67). Overall, the entrepreneurial ecosystem in Nova Scotia is quite robust. However, an examination of the individual components of the ecosystem pillars points to areas of strength to build upon and areas where further policy attention would likely pay dividends.

Recommendation 1: Engage established businesses.

Networking is a strength of the region, especially in the context of nascent entrepreneurs. This appears to reflect the significant efforts of the region in fostering new businesses and easing the burden of start-up. Like other regions, Nova Scotia no longer has a 'start-up' problem as that community is quite robust; rather, it is the established businesses that appear to be falling through the cracks. There is an opportunity to offer more tailored programs for firms that successfully graduate from the start-up phase. This would be viewed favourably in the region where an entrepreneurial culture is well established. Continued help for entrepreneurs through the entire business lifecycle is a logical extension of current efforts.

Recommendation 2: Adopt a multipronged approach to talent pool retention.

Nova Scotia's talent pool is healthy and producing the right talent in the right quantities. This is a significant strength since most ecosystems struggle to source talent internally. However, opportunities exist to retain talent produced in the region. Having a region's talent in demand from other jurisdictions demonstrates that a region has qualified individuals with skills that the market needs. Although there are benefits for some movement in this regard (i.e., for experience with business practices and norms outside the province), retaining talent is important to support

regional competitiveness and local access to talent. Policy attention on the retention of talent could be directed at maintaining connections with individuals that leave to expand the region's networking reach, providing a mechanism for individuals/firms that leave to easily return to Nova Scotia, and ensuring there are incentives to remain in the province.

Recommendation 3: Foster inter-provincial and international reach.

The Nova Scotia ecosystem benefits greatly from local demand for innovative products and services. However, accessing markets outside the region is more challenging. Continued policy attention on easing inter-provincial trade barriers (actual or perceived) and facilitating international trade in services (in addition to products) would build upon this existing strength.

Recommendation 4: Consolidate entrepreneurial leadership.

This recommendation integrates strengths around support services, formal institutions, and finance in the region. Mentoring among nascent firms is a strength of the region. But if the policy intent is to help firms scale their businesses, then providing entrepreneurial leadership to consolidate mentoring and angel investment for established businesses is required. Nova Scotia would benefit from initiatives focused on end-to-end 'red tape' reduction.



1. INTRODUCTION

1.1 The Global Entrepreneurship Monitor

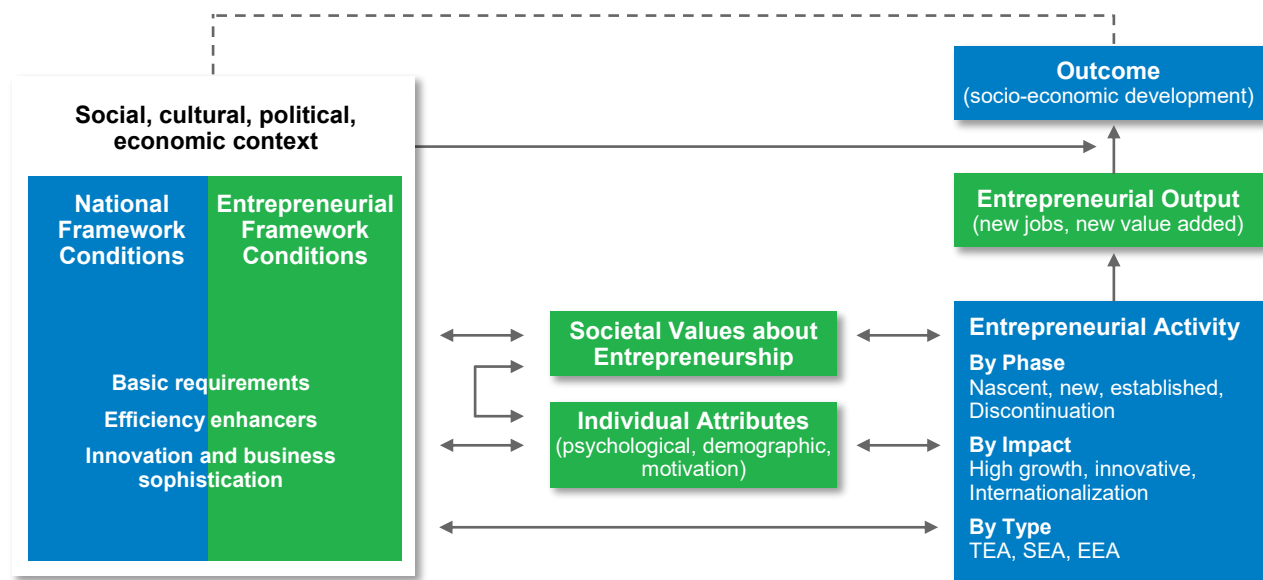
This study of Nova Scotia's entrepreneurial ecosystem is based on methodology developed by the Global Entrepreneurship Monitor (GEM). GEM is a consortium of national country teams, primarily associated with top academic institutions, that carries out survey-based research on entrepreneurship around the world. GEM is the only global research source that collects data on entrepreneurship directly from individual entrepreneurs. GEM's Adult Population Survey provides analysis on the characteristics, motivations and ambitions of individuals starting businesses, as well as social attitudes towards entrepreneurship. GEM's National Expert Survey looks at the national context in which individuals start businesses.

GEM's unique research tools and data benefit numerous stakeholder groups including:

- Policymakers who are able to make better-informed decisions to help their entrepreneurial ecosystems thrive;
- Entrepreneurs who have better knowledge on where to invest and influence;
- Academics who are able to apply unique approaches to studying entrepreneurship at the national and regional levels;
- Sponsors who can collaborate with GEM to advance their organizational interests; and
- International organizations who leverage the entrepreneurial insights from GEM through reports and events.

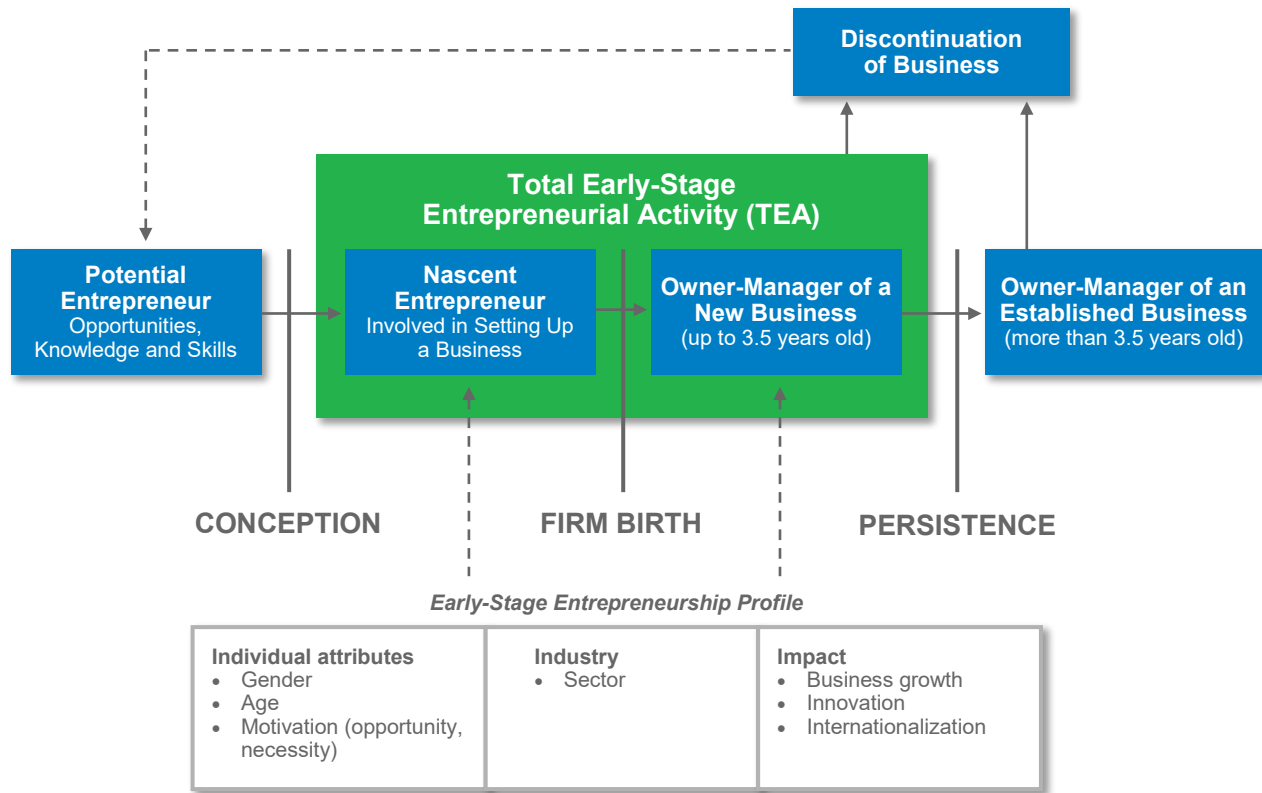
GEM reports provide comprehensive information on entrepreneurial topics and regions thanks to a wide set of indicators on entrepreneurship that make up its theoretical framework shown in Figures 1.1 and 1.2. These reports often cover an economy's entrepreneurial framework conditions, the individual attributes of entrepreneurs and the prevalence of attitudes and social values related to entrepreneurship. Additionally, data are gathered on a range of entrepreneurial activity indicators, such as: the stage or phase of a new venture (nascent, in consolidation, motivation (necessity versus opportunity)), industry, dimension, growth, innovativeness, competitiveness, internationalization, job creation, social role, intrapreneurship, discontinuation and informal financing, among others.

Figure 1.1 The Global Entrepreneurship Monitor Conceptual Framework



Source: GEM Atlantic Canada Report 2019

Figure 1.2 GEM Model of Business Phases and Entrepreneurial Indicators



Source: GEM Atlantic Canada Report 2019



1.2. The Importance of Understanding Entrepreneurial Ecosystems

Not all entrepreneurial activity has a big impact on economic development. Only a limited number of companies, especially those start-ups that are productive and grow rapidly, have the greatest impact in terms of employment and economic growth. At the same time, entrepreneurship is not the same in different places. It cannot be expected that the success of certain regions, cities or areas such as Silicon Valley, Boulder, Shanghai, Shen Zhen, London or Toronto, could be replicated in other places—even within the same country—with the same result. In these examples, innovation has followed an exponential growth curve thanks to the creation of high-impact start-ups. This has encouraged the emergence of a growing number of initiatives that try to replicate their model. However, trying to transplant this formula to other locations usually does not work, since it starts from an incorrect premise that the initiatives that work in one place can be implemented in another with the same result (Arenal et al., 2017).

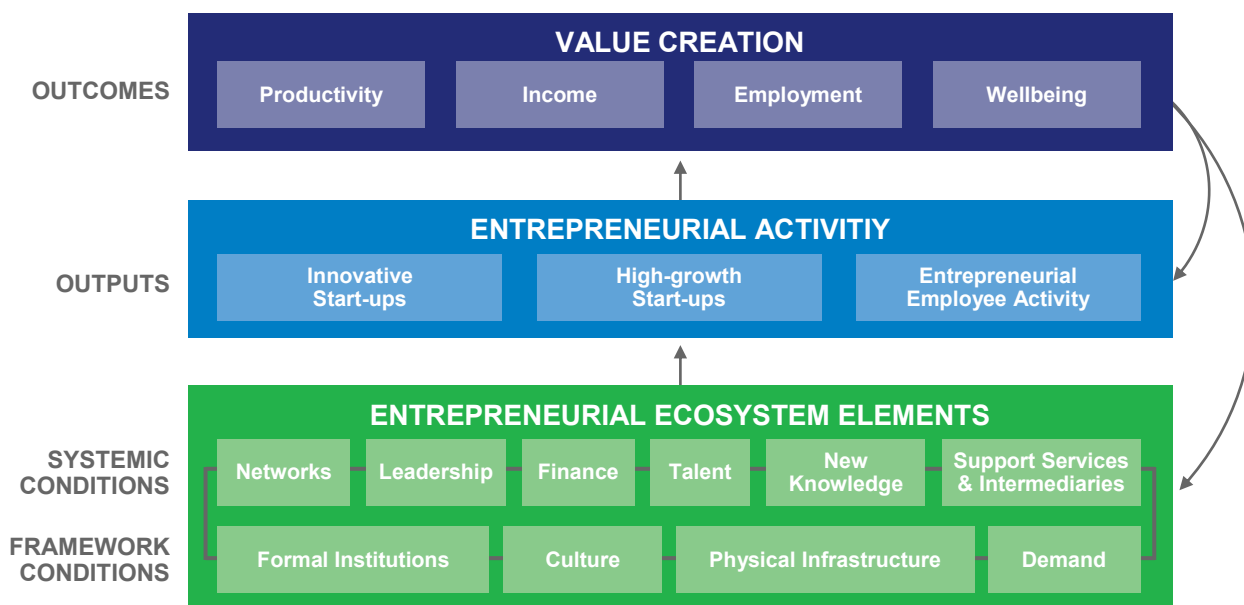
Recognizing the importance of the social, economic, political and cultural context in which entrepreneurship operates has emerged as the field of entrepreneurship research has expanded beyond its earlier focus on studying individual entrepreneurs and their personality traits (Dodd & Anderson, 2007). Entrepreneurship is now recognized as a social process embedded in a particular local context (Nijkamp, 2003; Steyaert & Katz, 2004; Zahra, 2007; Zahra et al., 2014). The social, economic, political and cultural structures and processes associated with a particular place have a significant influence on entrepreneurial activity (Johannisson, 2011).

Therefore, it is important to identify the strengths and weaknesses in a specific place or region as a basis for proposing concrete actions and policies. Until recently, there has been little rigorous evidence with which to base recommendations. Although secondary sources of information exist (e.g., Startup Genome), GEM's methodology uniquely gathers primary data directly from entrepreneurs and industry experts themselves to help identify regional characteristics and to allow different regions to be compared.

1.3 The GEM—Stam model

The assessment of entrepreneurial ecosystems is based upon the widely cited theoretical model developed by Eric Stam and Ben Spigel (2016). Based on a comprehensive review of existing research, including related concepts such as industrial districts, clusters and innovation systems, Stam (2015) created the theoretical model of 10 key ecosystem elements (Figure 1.3).

Figure 1.3 Theoretical Model of Entrepreneurial Ecosystems



Source: Stam (2015)

Stam and Spigel (2016) explain that:

“the model includes insights from the previous literature (i.e., the aspects that have been deemed important elements of entrepreneurial ecosystems), but most importantly it provides more causal depth... including the upward and downward causation, and intra-layer causal relations. Upward causation reveals how the fundamental causes of new value creation are mediated by intermediate causes, while downward causation shows how outcomes and outputs of the system over time also feed back into the system conditions.”

The GEM Entrepreneurial Ecosystem Index research study was the first to operationalize Spigel and Stam’s theoretical model, drawing on GEM’s extensive experience measuring entrepreneurship indicators over the last 20 years. Based on GEM’s methodology, Sternberg, von Bloh and Coduras (2018, 2019) built a set of constructs to quantitatively assess the 10 ecosystem pillars. Assessment of these 10 key indicators by entrepreneurs, business people and industry experts allows for a detailed and comprehensive quantitative assessment of an entrepreneurial ecosystem and allows researchers to draw conclusions and generate recommendations for improvement, if necessary. A weighted linear combination of these 10 pillars gives a composite index called the Entrepreneurial Ecosystem Index (ESI) which represents the average quality and state of an ecosystem. The ESI makes ecosystems easy to interpret and rank so benchmarking among different ecosystems in different countries or provinces within countries can be done.



2. STUDYING NOVA SCOTIA'S ENTREPRENEURIAL ECOSYSTEM

2.1 History of GEM Research in Nova Scotia

Nova Scotia has long history of involvement with the GEM Canada research team. Harvey Johnstone, professor emeritus at Cape Breton University, joined the GEM Canada team as a founding member in 2013, while Kevin McKague, Canada Research Chair in Social Enterprise and Inclusive Markets and professor of entrepreneurship and strategy at Cape Breton University, joined in 2016. This participation provided key insights into the entrepreneurial contributions of Nova Scotia, which featured prominently in two prior GEM reports covering Atlantic Canada in 2015 and 2019. The most recent development of this program of research is focusing on Nova Scotia's entrepreneurial ecosystem.

2.2 Data Collection

GEM is unique as it annually collects primary survey data from entrepreneurs, owner-managers and industry experts. While other reports are based on secondary sources of information, GEM remains the only project dedicated to creating cross-national and cross-regional tools for measuring entrepreneurship through primary data collection. Data for the assessment of the Nova Scotia entrepreneurial ecosystem came from two primary data collection instruments:

1. *The Adult Population Survey (APS) Entrepreneurial Ecosystem Index (ESI)* was developed based upon a representative sample of 396 adults aged 18-64 in Nova Scotia surveyed between May and September 2019, including nascent entrepreneurs and owner-managers of more established businesses.
2. *The Regional Expert Survey (RES) Entrepreneurial Ecosystem Index (ESI)* was a purposively sampled survey of 30 experts in Nova Scotia with experience in at least one of the 10 entrepreneurial ecosystem indicators, surveyed between June and August 2019.

In total, 426 individuals were surveyed, capturing 98 variables over the 10 entrepreneurial ecosystem pillars.

The data collected by the GEM Entrepreneurial Ecosystem Index surveys consists of a set of 98 original variables to describe the quality of Nova Scotia's entrepreneurial ecosystem. These variables were grouped into the 10 pillars that make up the entrepreneurial ecosystem following Stam's model (Figure 1.3). Table 2.1 summarizes the final set of indicators derived from combinations of this wide set of original variables regarding the evaluation of the quality of any ecosystem.

Table 2.1 GEM-ESI Main Indicators

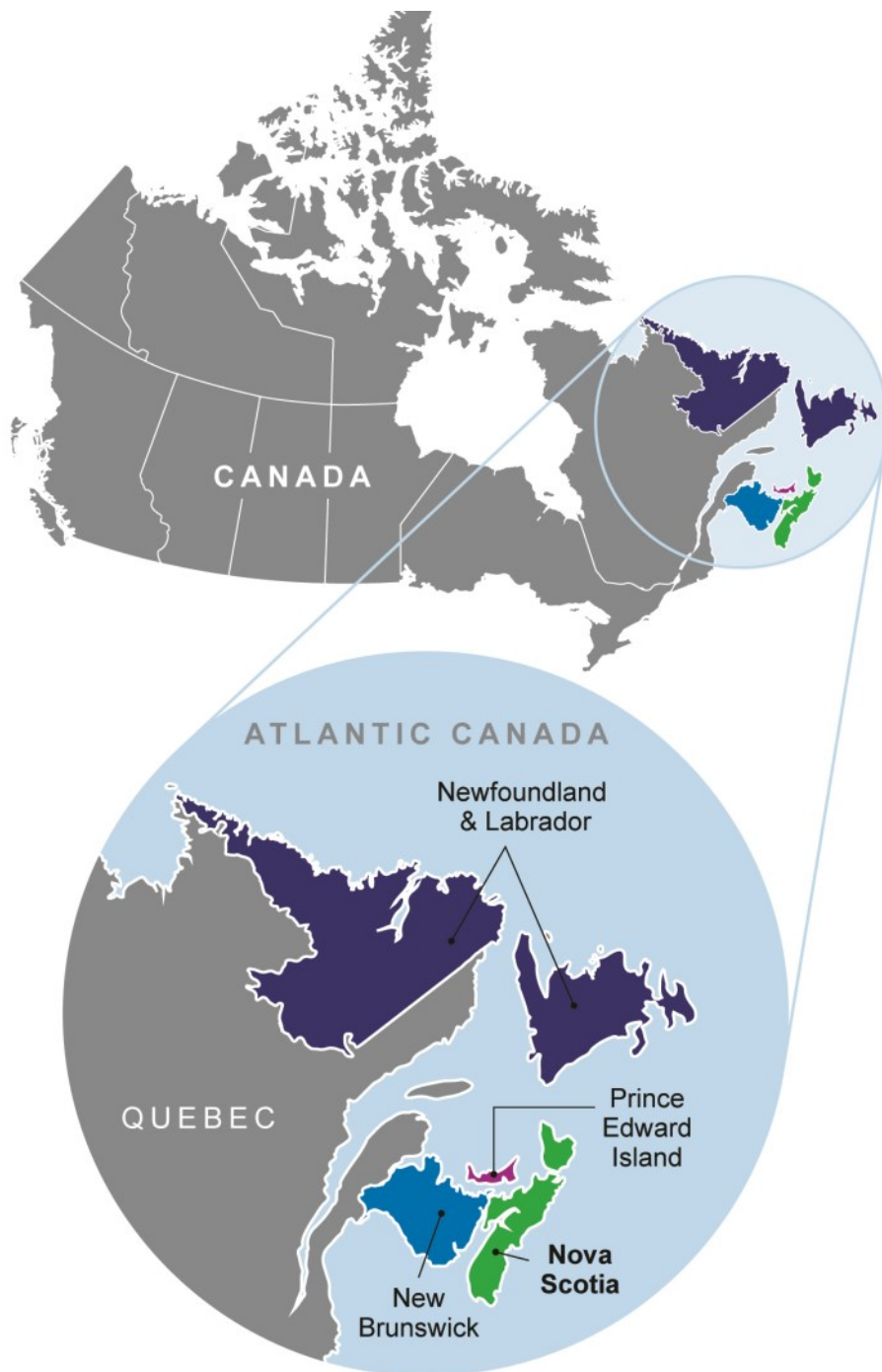
Indicator	Description	Methodology
N	Network pillar	Combination of 15 APS & RES variables
L	Leadership pillar	Combination of 10 APS & RES variables
F	Financing pillar	Combination of 11 APS & RES variables
T	Talent pillar	Combination of 12 APS & RES variables
K	Knowledge pillar	Combination of 5 APS & RES variables
S	Support services pillar	Combination of 10 APS & RES variables
G	Formal institutions pillar	Combination of 9 APS & RES variables
C	Culture pillar	Combination of 10 APS & RES variables
P	Physical infrastructure pillar	Combination of 10 APS & RES variables
D	Demand pillar	Combination of 6 APS & RES variables
ESI_SC	Index on systemic conditions	Calculated over the 10 pillars
ESI_FC	Index on framework conditions	Calculated over the 10 pillars
ESI	Index of the ES quality	Composite index

Note: APS is the Adult Population Survey and RES is the Regional Expert Survey.

2.2 Geographical Situation and Main Characteristics

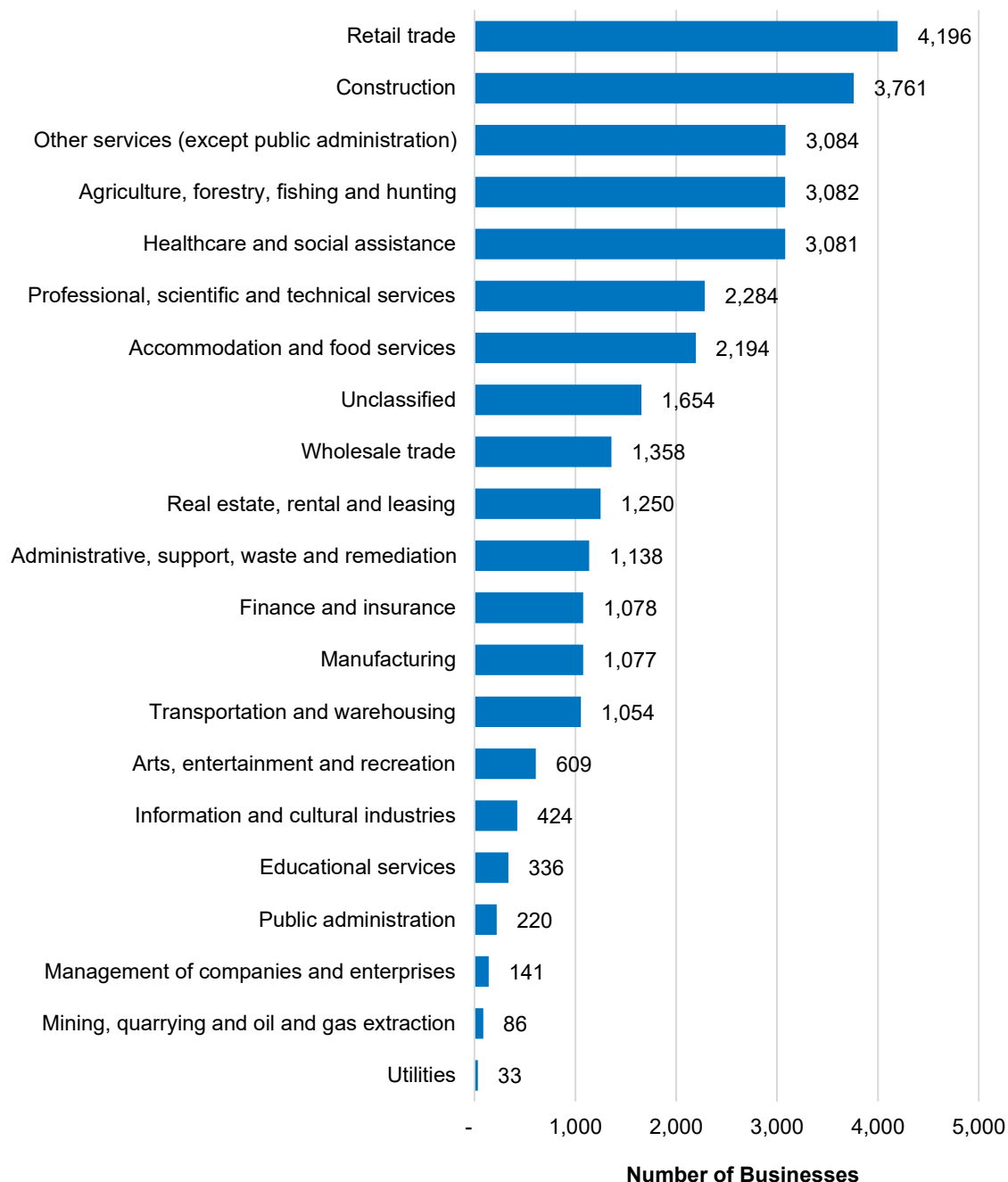
Nova Scotia is a province in eastern Canada. With a population of 971,395 as of 2019, it is the most populous of Canada's four Atlantic provinces. See Figures 2.1 for relative geographic location. Nova Scotia is Canada's second-most densely populated province and second-smallest province by area.

Figure 2.1 Nova Scotia within Canada



As of September 2019, the unemployment rate for the province was 7.2 per cent, compared to 5.5 per cent nationally. As of June 2019, there were 32,140 businesses with employees in Nova Scotia with the top five categories being retail trade; construction; other services except public administration; agriculture, forestry, fishing and hunting; health care and social assistance (See Figure 2.2). There were an additional 50,706 businesses without employees.

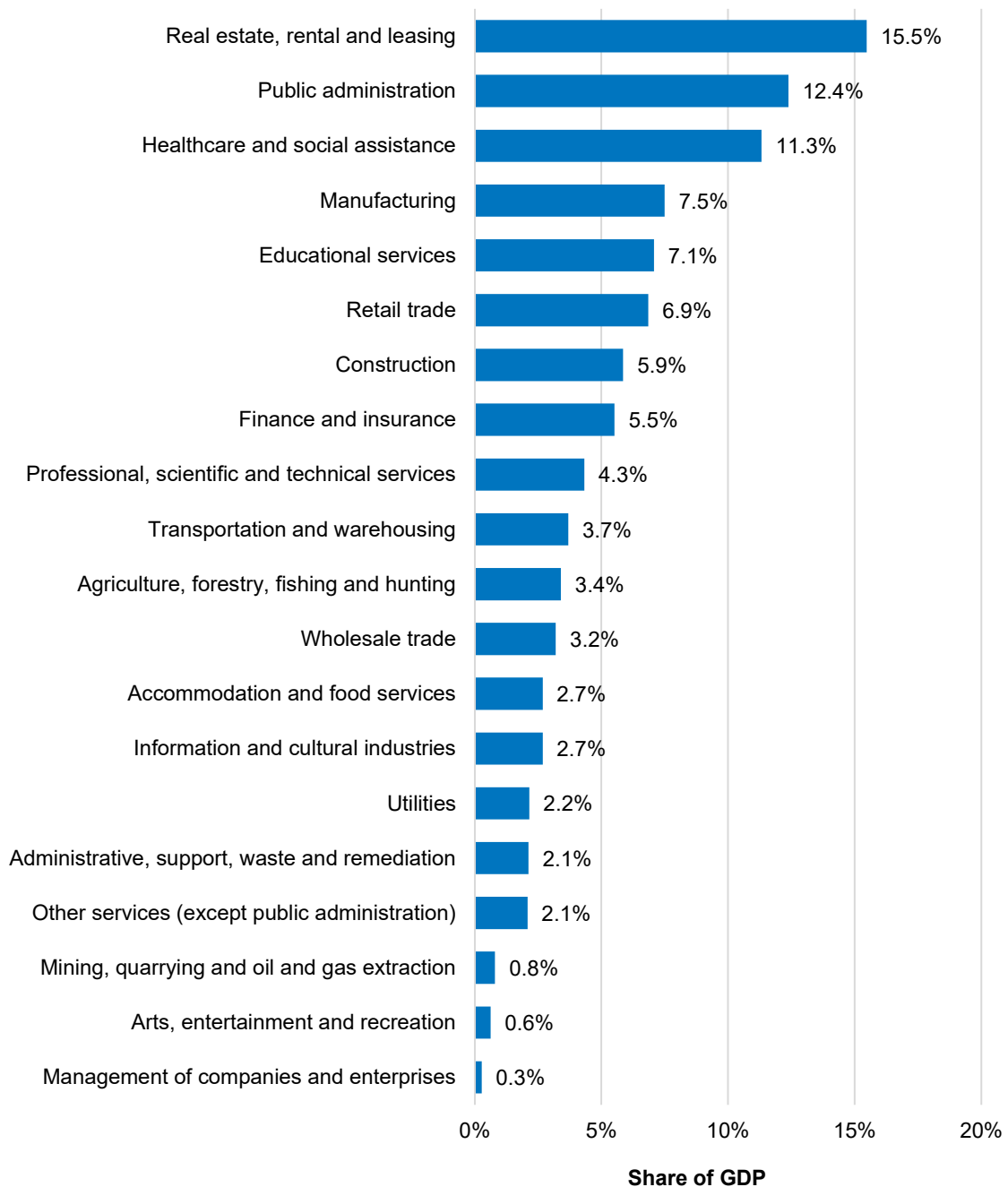
Figure 2.2 Number of Businesses with Employees in Nova Scotia by Industry



Source: Statistics Canada and Statista.com

GDP for Nova Scotia in 2019 was \$37 billion compared to \$1.64 trillion for Canada as a whole. The top contributors to GDP by category were real estate and rental and leasing; public administration; health care and social assistance; manufacturing; and educational services. A detailed breakdown of GDP by industry is provided in Figure 2.3.

Figure 2.3 GDP of Nova Scotia by Industry

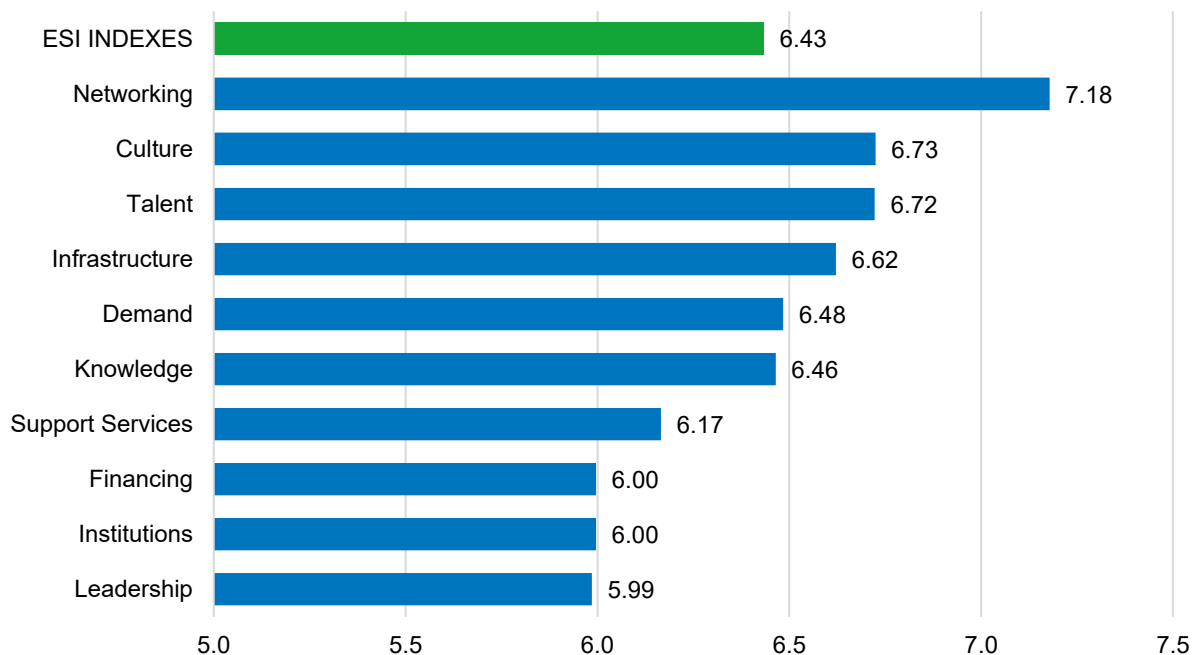


Source: Statista.com

3. NOVA SCOTIA'S ENTREPRENEURIAL ECOSYSTEM

The results presented in Figure 3.1 are based upon the 10 entrepreneurial ecosystem pillars.

Figure 3.1 Elements of Nova Scotia's Entrepreneurial Ecosystem



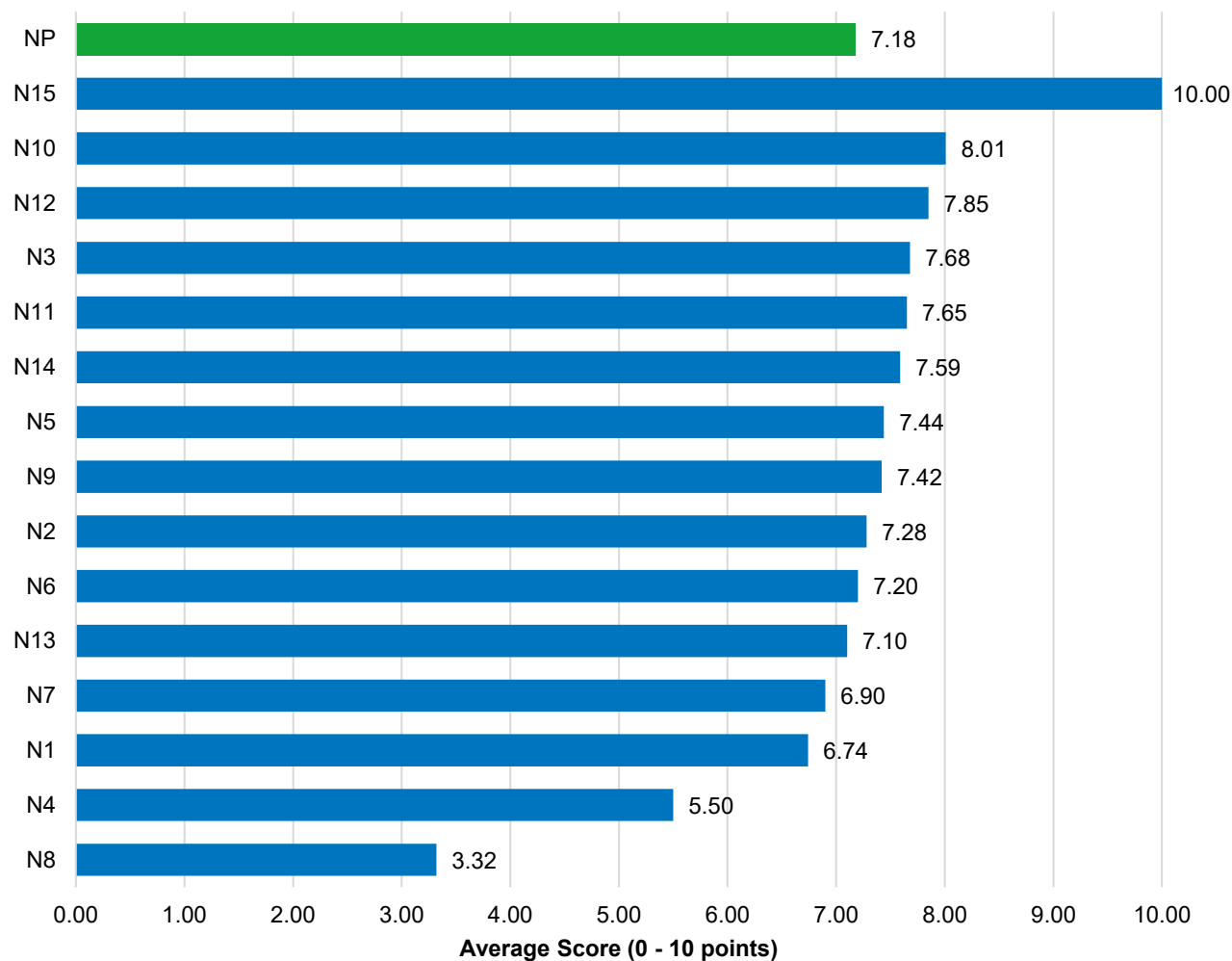
Overall, the highest component score was for networking, while culture, talent, infrastructure, demand and knowledge were all at the high-moderate level. Support services, financing, institutions and leadership were in the low-moderate levels. In the charts and tables that follow, 0 represents the lowest value while 10 represents the highest value for each component. “Nascent entrepreneurs” refers to the founders of businesses up to 3 months in the market, while “new” and “established owner-managers” refers to leaders of businesses active between 3-42 months and more than 42 months in the market respectively. Further analysis of the component scores for each pillar is detailed in the remainder of this section.


3.1 Networking

The networking pillar is comprised of 15 variables and details the average state of the networking and communication resources used by actors in Nova Scotia's entrepreneurial ecosystem.

- Networking was the strongest pillar of Nova Scotia's entrepreneurial ecosystem, with the overall score of 7.18.
- The strongest component of the networking pillar was that individuals involved in nascent and established entrepreneurial activity were well known to each other. This component received the maximum score of 10.
- The weakest component of this pillar was that owner-managers rarely attend local business networking events (3.32 points). Nascent entrepreneurs, on the other hand, are more likely to attend business networking events, with a component score of 5.50 points. While nascent entrepreneurs reported being more active in their regional network, both groups obtained scores well below the pillar average.

Figure 3.2 Networking Ecosystem Conditions Ranked Scores



- 
- Both groups reported that it is easy to get in touch with other managers of young businesses in the region. Nascent entrepreneurs gave this component a score of 6.74 points, while owner-managers gave this component a score of 7.44 points.
 - Nascent entrepreneurs felt that it is easy to find the right people for advice through their network (7.28 points). Owner-managers echoed this sentiment with a component score of 7.20 points.
 - Owner-managers were seen to actively participate in at least one local business event by both nascent entrepreneurs (7.68 points) and new owner-managers (6.90 points).
 - Public and private organizations play an important part in the networking pillar. In the region, public organisations were viewed to run start-up events with sufficient frequency to support new and growing business effectively (8.01 points). Private institutions were also viewed favourably (7.65 points) when it came to running start-up events in the region.
 - There seems to be a high degree of connectivity between the existing businesses in the Nova Scotia ecosystem. Individuals responded favourably (7.85 points) when asked if there are visible examples of a well-connected community of start-ups and entrepreneurs with active investors, advisors, etc. In Nova Scotia, start-up networks were seen to be well known and accessible (7.10 points). Different local organizations in Nova Scotia were seen to be organizing events to foster entrepreneurial activity (7.59 points).

The networking pillar had the highest overall score of 7.18. The component scores point to a vibrant community of entrepreneurs helping each other and providing mentorship and support within their communities. Local events appear to be particularly engaging for nascent entrepreneurs, while they appear to have less appeal for owner-managers.

Table 3.1 Networking Ecosystem Conditions Component Descriptions

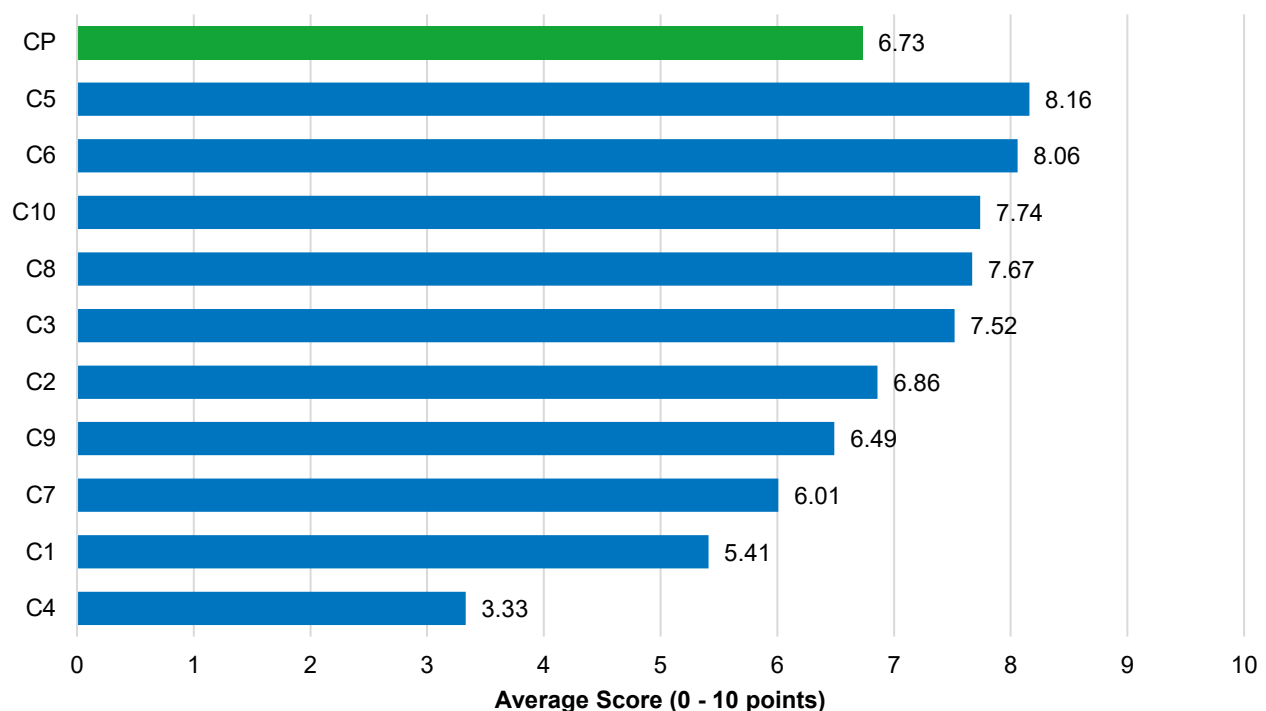
Question	Variables / Indicators	Average Score
NP	Networking pillar overall score	7.18
N15	Per cent of individuals that know other entrepreneurs	10.00
N10	Public organizations run start-up events with sufficient frequency to support new and growing businesses effectively	8.01
N12	There are examples of well-connected start-ups with active investors, advisors, etc.	7.85
N3	Most owner-managers in the same industry/region participate in at least one local business network for nascent entrepreneurs	7.68
N11	Private organizations or members of the start-up community run start-up events with sufficient frequency to support new and growing businesses	7.65
N14	Different local organizations often jointly organize events to foster regional entrepreneurship activity	7.59
N5	Easy to get in touch with other owner-managers of young businesses personally (for new and established owner-managers)	7.44
N9	Per cent of population that thinks that media favour entrepreneur's activities	7.42
N2	You can easily find the right people through your network for help/advice (for nascent entrepreneurs)	7.28
N6	You can easily find the right people through your network for help/advice (for new and established owner-managers)	7.20
N13	In the region: start-up community networks are well known and accessible	7.10
N7	Most owner-managers in same industry/region participate in at least one local business network (for new and established owner-managers)	6.90
N1	Easy to get in touch with other owner-managers of young businesses personally (for nascent entrepreneurs)	6.74
N4	How often do you attend local business networking events? (for nascent entrepreneurs)	5.50
N8	How often do you attend local business networking events? (for owner-managers)	3.32

3.2 Culture

The culture pillar details the average state of entrepreneurial culture within Nova Scotia and the degree that good practices are adopted among the nascent entrepreneurs and owner-managers within the province. This pillar covers the level of risk aversion, the perceived reputation of entrepreneurs, the existence of events and the overall entrepreneurial vibe in the region, among other things. The culture pillar is formed by 10 variables.

- The culture ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.3 and Table 3.2, respectively.
- Culture was the second strongest pillar of Nova Scotia's entrepreneurial ecosystem, with the overall score of 6.73.
- The individual components for the culture pillar show that eight of the 10 variables received scores above 6 points, indicating that several aspects of this pillar are strengths of the Nova Scotia ecosystem.
- The strongest component of this pillar was that most people are supportive of individuals who are interested in becoming entrepreneurs. This held for both nascent entrepreneurs (8.16 points) and owner-managers (8.06 points). In addition, most people are supportive of individuals looking to start a new business, with a component score of 7.74 points. This indicates that entrepreneurship is viewed in a positive light in Nova Scotia.

Figure 3.3 Culture Ecosystem Conditions Ranked Scores



- Individuals felt that there are many events organized for start-up entrepreneurs (7.67 points).
- There is a sense of healthy competition in the Nova Scotia ecosystem among new and established businesses. Individuals felt that there are few barriers posed by established businesses for new businesses (6.49 points).

Overall, the culture pillar is a strength of the Nova Scotia ecosystem, obtaining the second highest average score among all of the pillars (6.73). Entrepreneurs are viewed in a positive light within the region and there is support for promoting entrepreneurial activity.

Table 3.2 Culture Ecosystem Conditions Component Descriptions

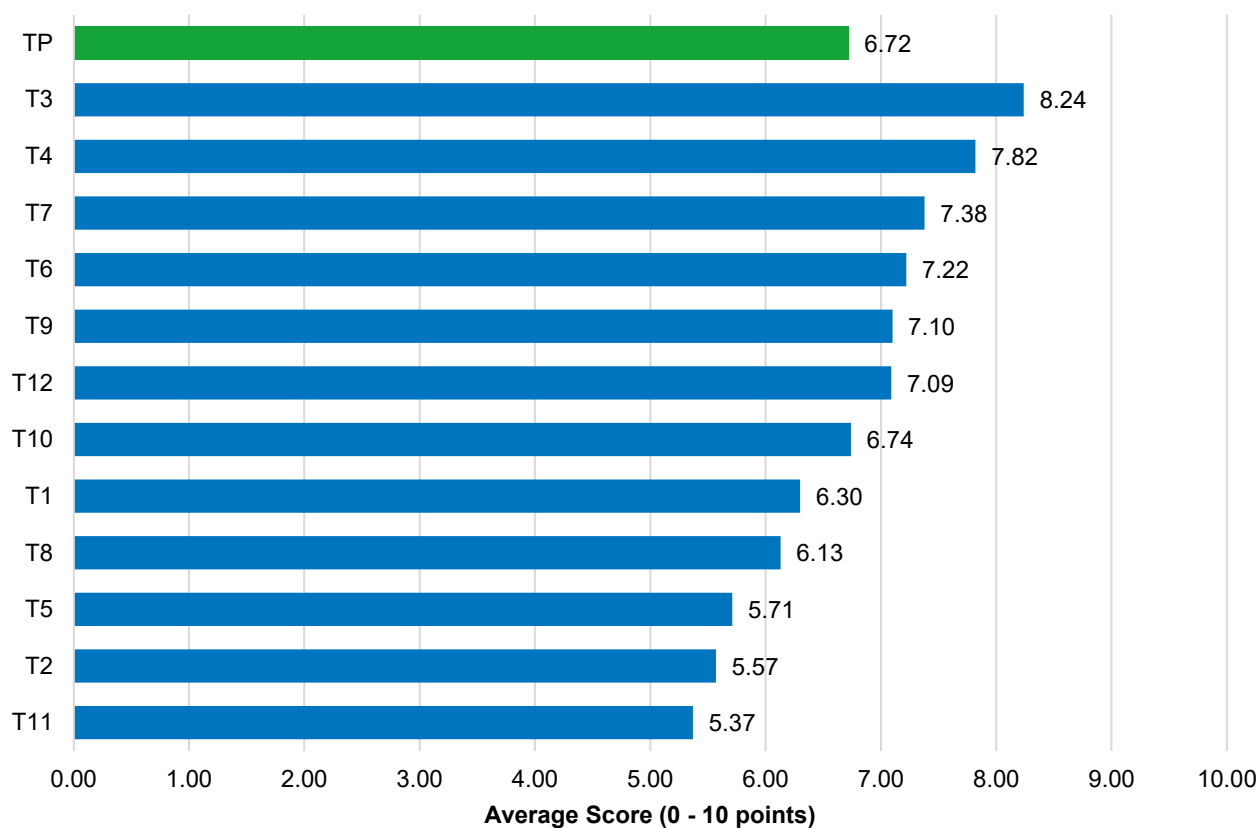
Question	Variables / Indicators	Average Score
CP	Culture pillar overall score	6.73
C5	Most people in Nova Scotia are supportive of individuals who are interested in becoming entrepreneurs (for nascent entrepreneurs)	8.16
C6	Most people in Nova Scotia are supportive of individuals who are interested in becoming entrepreneurs (for new and established owner-managers)	8.06
C10	Most people are supportive of individuals who are interested in becoming entrepreneurs	7.74
C8	There are many events for start-up entrepreneurs, such as meet-ups, pitch days, start-up weekends, boot camps, hackathons and competitions	7.67
C3	Those successful at starting a new business have a high level of status and respect	7.52
C2	Most people consider starting a new business a desirable career choice	6.86
C9	New and growing firms can enter markets without being unfairly blocked by established firms	6.49
C7	Large established firms are supportive of high-growth start-ups, pursuing a long-term interest or investment rather than hostile or short-term motives (takeover to shut down, dismantling, etc.)	6.01
C1	Fear of failure would prevent you from starting a business (reversed variable)	5.41
C4	Share of respondents who answered YES to: Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years? The share compares the regional and national values and results are organized in 3 possible scores for the target ES.	3.33

3.3 Talent

The talent pillar details the average state of the quality, availability and costs of employees to cover the current and future workforce needs of businesses in Nova Scotia. The talent pillar also partly covers possible knowledge spill-over or technology transfer from higher education institutions into start-ups or new businesses. The pillar is formed by 12 variables. The talent ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.4 and Table 3.3.

- The talent pillar scored moderately high at 6.72.
- One of the strengths of the talent pillar was the affordability of employees in the region, with both nascent entrepreneurs (8.24 points) and owner-managers (7.22 points) indicating that the talent pool is a relative strength of the Nova Scotia ecosystem.
- Both nascent entrepreneurs (7.82 points) and owner-managers (7.38 points) rated the skill level of available employees in the region to be sufficient.
- Individuals reported that a high array of skilled workers are available for new and growing businesses (6.13 points). However, when asked whether they felt that there is a shortage of the types of employees needed for operating their business, responses from both nascent entrepreneurs (5.57 points) and owner-managers (5.71 points) scored below average.
- Higher education institutions are instrumental in generating the talent pool in the region. In Nova

Figure 3.4 Talent Ecosystem Conditions Ranked Scores



Scotia, educational institutes appear to be producing sufficient talent for the growth of businesses. These components received a high score both in terms of quality (7.10 points) and quantity (6.74 points) of talent.

- The lowest performing component of the talent pillar was talent retention (5.37 points). Although talent is being produced in quantity and quality, the province is challenged to retain this talent in Nova Scotia.

Overall, the talent pillar is one of the strengths of the Nova Scotia ecosystem, with the third highest score among all of the pillars. However, while there is a fast replenishing pool of talent in the area, talent retention in the province remains challenging.

Table 3.3 Talent Ecosystem Conditions Component Descriptions

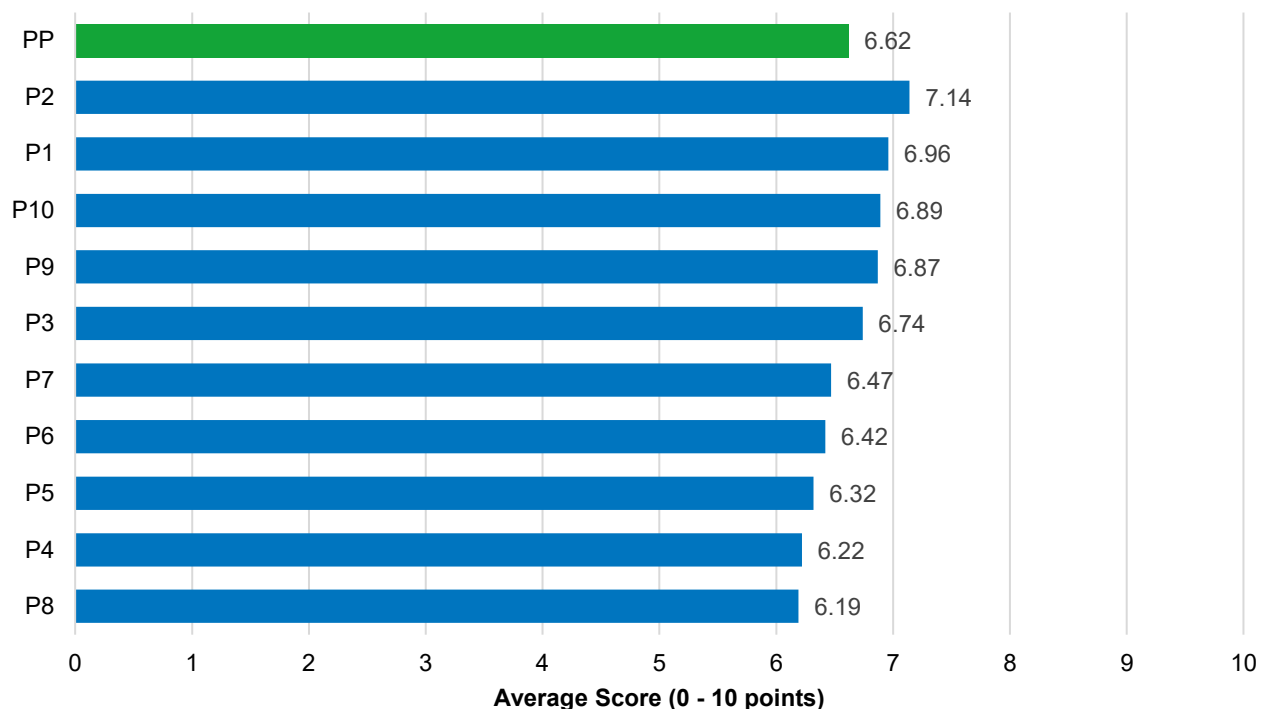
Question	Variables / Indicators	Average Score
TP	Talent pillar overall score	6.72
T3	You can afford to hire the employees you need for your business locally (for nascent entrepreneurs)	8.24
T4	You are satisfied that the skill levels of people in Nova Scotia are sufficient for your business needs (for nascent entrepreneurs)	7.82
T7	You are satisfied that the skill levels in Nova Scotia are sufficient for your business needs (for new and established owner-managers)	7.38
T6	You can afford to hire the employees you need for your business locally (for new and established owner-managers)	7.22
T9	In Nova Scotia, higher education institutions ensure the workforce for new and growing firms is sufficient in quality	7.10
T12	Nova Scotia is an attractive location to move to for people with the skills needed by new and growing firms	7.09
T10	In Nova Scotia, higher education institutions ensure the workforce for new and growing firms is sufficient in quantity	6.74
T1	You have the knowledge, skill and experience required to start a new business	6.30
T8	In Nova Scotia a broad array of highly skilled workers is available for new and growing firms	6.13
T5	There is shortage of the types of employees you need for your business in your region (for new and established owner-managers) (reversed variable showing degree of disagreement with the proposed statement)	5.71
T2	There is a shortage of the types of employees you need for your business in your region (for nascent entrepreneurs) (reversed variable showing degree of disagreement with the proposed statement)	5.57
T11	In Nova Scotia, highly qualified young people tend to stay within the region	5.37

3.4 Physical Infrastructure

The physical infrastructure pillar details the state of the physical infrastructure critical to new business establishment. It covers the state, accessibility and costs of transport, telecommunications and office or production space. The physical infrastructure pillar is formed by 10 variables. The physical infrastructure ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.5 and Table 3.4.

- The physical infrastructure pillar received a moderately high score of 6.62.
- With all components of this pillar obtaining a score of 6 or higher, this pillar can be considered a relative strength for the Nova Scotia ecosystem.
- The strongest component of this pillar (with 7.14 points) was telecommunications, Internet access and speed for nascent entrepreneurs. In the case of owner-managers, the score for this component was lower (6.32 points).
- Nascent entrepreneurs scored transportation infrastructure 6.96 points, while owner-managers gave the component 6.22 points.
- Two additional components of the physical infrastructure pillar are the availability and affordability of land to grow business. Nascent entrepreneurs gave this component a slightly above average score of 6.74 points. Owner-managers scored this component slightly below average at 6.42 points.

Figure 3.5 Physical Infrastructure Ecosystem Conditions Ranked Scores



- For each of these components, nascent entrepreneurs ranked the indicators higher than new and established owner-managers.
- Access to physical infrastructure for new and growing businesses is considered in the remaining components of this pillar. Respondents felt that it is not too expensive for new and growing firms to get access to communications (6.19 points) and that new firms have adequate access to services like high speed Internet (6.87 points). Office space was also seen as being available for new and growing business (6.89 points).

Overall, the physical infrastructure pillar performed well in comparison to the other pillars, receiving the fourth highest score. However, the disparity in responses between nascent entrepreneurs and owner-managers suggests that access to physical infrastructure is not the same for everyone.

Table 3.4 Physical Infrastructure Ecosystem Conditions Component Descriptions

Question	Variables / Indicators	Average Score
PP	Physical infrastructure pillar overall score	6.62
P2	Telecommunications, Internet access and speed (for nascent entrepreneurs)	7.14
P1	Transport infrastructure (for example, roads, parking space, traffic flow) (for nascent entrepreneurs)	6.96
P10	New or growing firm have access to affordable office space	6.89
P9	New or growing firms have access to state-of-the-art Internet connection speed	6.87
P3	Price and availability of additional physical space to grow your business (for nascent entrepreneurs)	6.74
P7	The general physical infrastructure, like roads, utilities and waste disposal, provides good support for new and growing firms	6.47
P6	Price and availability of additional physical space to grow your business (for new and established owner-managers)	6.42
P5	Telecommunications, Internet access and speed (for new and established owner-managers)	6.32
P4	Transport infrastructure (for example, roads, parking space, traffic flow) (for new and established owner-managers)	6.22
P8	It is not too expensive for a new or growing firm to get good access to communications (phone, Internet, etc.)	6.19

3.5 Demand

The demand pillar details the state of the market dynamics, evaluating the regional market and the accessibility of external markets. The demand pillar is formed by six variables. The demand ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.6 and Table 3.5.

- The demand pillar received a moderate score of 6.48.
- The strongest component of this pillar was the openness of Nova Scotia consumers to new and innovative products and services (6.79 points).
- The weakest component was perception that entrepreneurs have regarding the opportunity to start a new business in Nova Scotia. This component received a score of 6.06 points (which is moderately high but still the weakest component of the pillar).
- There is a good relationship between consumers in Nova Scotia and local firms in the region. Respondents felt that consumers have a high preference for buying local goods from local firms, with this component receiving a score of 6.59 points. This relationship is aided by the fact that respondents felt that firms have the ability to sell their goods locally (6.67 points).
- There is a preference shown to firms in Nova Scotia. This is evident by having a lot of the first customers served by firms in Nova Scotia are from Nova Scotia (6.34).

Overall, the demand pillar was the fifth highest-scoring pillar (6.48). This pillar indicates strong local demand for innovative product and services; however, accessing markets outside the region is slightly more challenging.

Figure 3.6 Demand Ecosystem Conditions Ranked Scores

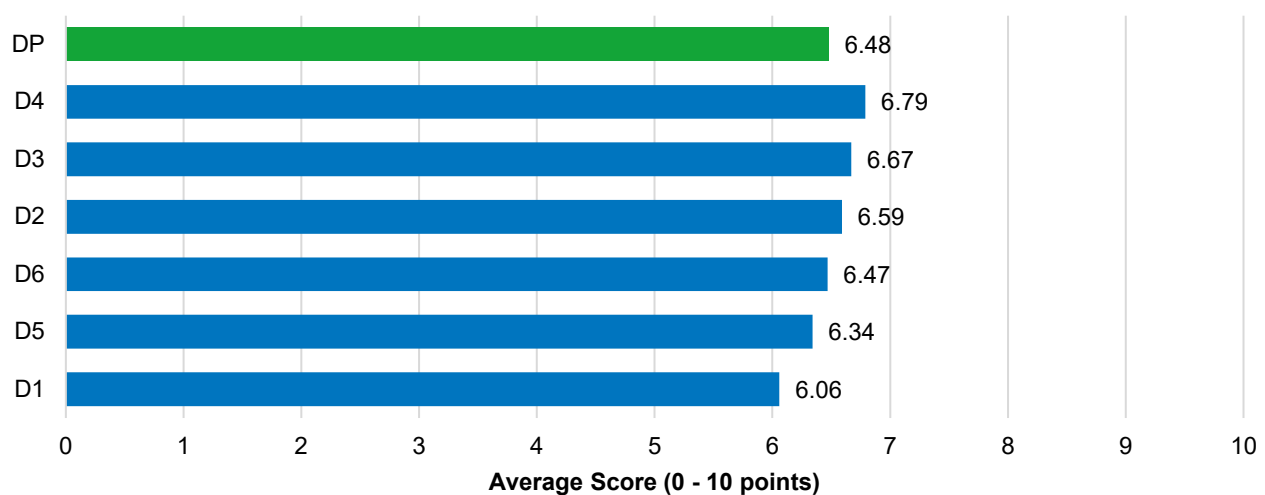




Table 3.5 Demand Ecosystem Conditions Component Descriptions

Question	Variables / Indicators	Average Score
DP	Demand pillar overall score	6.48
D4	Consumers are open to new and innovative products and services	6.79
D3	Most new and growing firms can sell their goods and services locally	6.67
D2	Customers prefer, if possible, to buy goods and services which are produced by local firms	6.59
D6	It is easy to access markets outside of the region	6.47
D5	The first customers of many new firms are located in this region	6.34
D1	In the next six months, will there be good opportunities for starting a business in the area where you live?	6.06

3.6 Knowledge

The knowledge pillar details the availability of, and access to, knowledge and technologies as well as knowledge spill-over within the region. This pillar covers the other part of knowledge transfer from higher education institutions that was partially included in the talent pillar. It also includes the extent to which business ideas are influenced by other regional actors or businesses. The knowledge pillar is formed by five variables. The knowledge ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.7 and Table 3.6.

- The knowledge pillar received a moderate score of 6.46.
- The results suggest that other businesses in Nova Scotia are often not the source of business ideas, with this component getting a score of 5.67 points.
- For a majority of new and established owner-managers, resources from the local region did not give them the tools to build their business (5.72 points). In contrast, nascent entrepreneurs were more likely to attribute their success to something they learned in Nova Scotia or from someone in Nova Scotia (7.08 points).
- Respondents felt that there are a growing number of businesses using technology developed at local universities (7.15 points), illustrating a strong connection between the Nova Scotia ecosystem and the universities of the region.
- Knowledge of doing business was seen to flow relatively freely between entrepreneurs, with the component receiving a moderately high score of 6.71 points.

The knowledge pillar was the sixth highest scoring pillar in the Nova Scotia ecosystem (6.46). While nascent entrepreneurs attributed their success, in part, to the knowledge exchanges provided in the region, established business entrepreneurs attributed less of their success to this factor.

Figure 3.7 Knowledge Ecosystem Conditions Ranked Scores

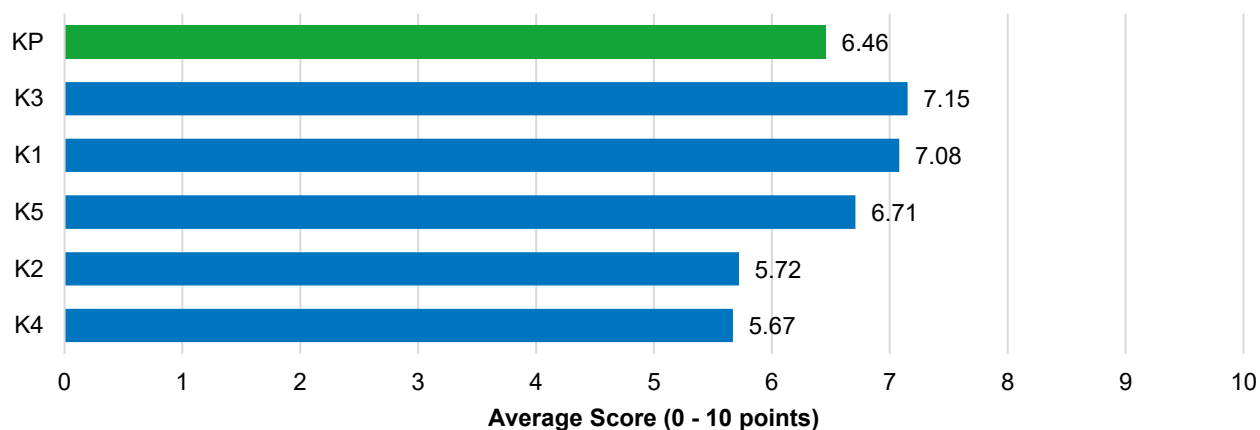




Table 3.6 Knowledge Ecosystem Conditions Component Descriptions

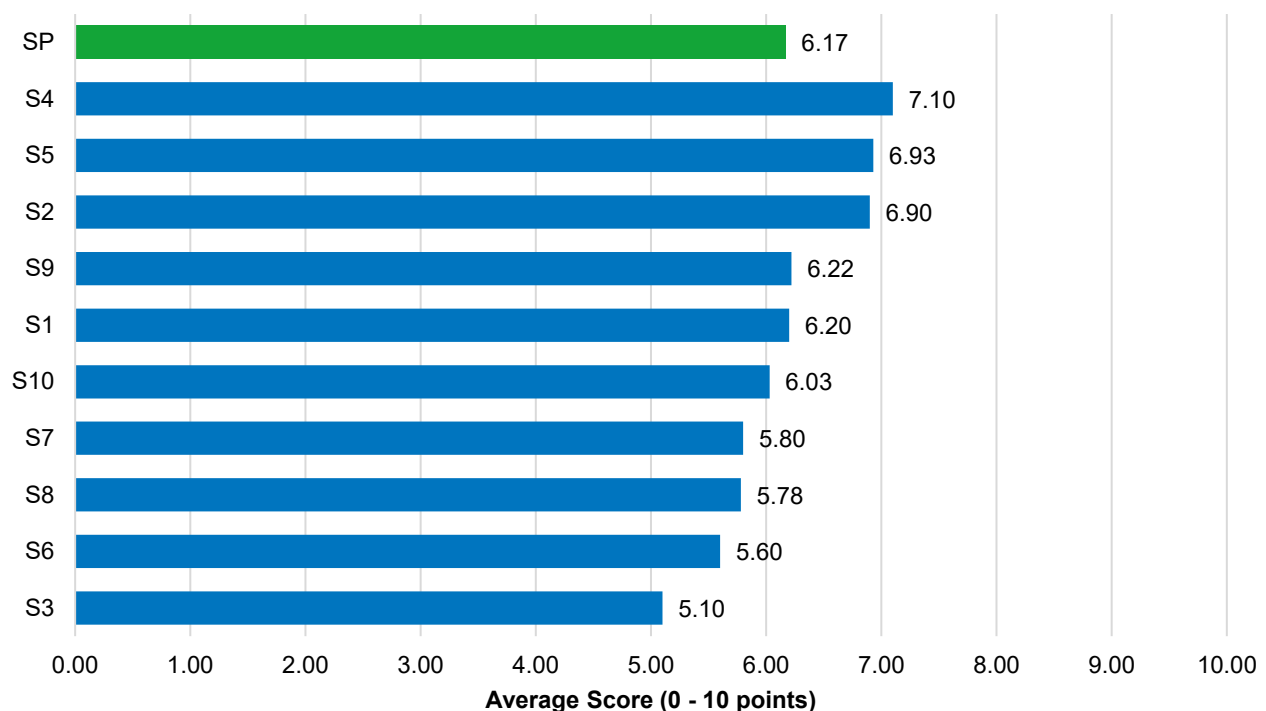
Question	Variables / Indicators	Average Score
KP	Knowledge pillar overall score	6.46
K3	There are many examples of new and growing firms that use new technology, science, and other knowledge developed in local universities and public research institutions	7.15
K1	Your business is built on the result of something you learned from a person or organization in your region (for nascent entrepreneurs)	7.08
K5	New knowledge about doing business flows freely between entrepreneurs in Nova Scotia	6.71
K2	Your business is built on the result of something you learned from a person or organization in your region (for new and established owner-managers)	5.72
K4	New knowledge developed by large businesses in Nova Scotia is an important source of ideas for new and growing firms within Nova Scotia	5.67

3.7 Support Services

The support services pillar details the availability of, and access to, commercial and professional services along with public infrastructure and facilities for entrepreneurs. The support services pillar is formed by ten original variables. The support services conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.8 and Table 3.7.

- The support services pillar received a score of 6.17.
- The strongest component of this pillar was that owner-managers felt that their new businesses were well supported by a program that was aimed at business start-ups (7.10 points). Nascent entrepreneurs concur (6.90 points).
- The weakest component of the pillar was the one that asked owner-managers if they felt there are enough workshops and other training opportunities to learn business skills for their business (5.10 points). In contrast, nascent entrepreneurs had a higher opinion of opportunities in the region, giving the component a score of 6.20 points. This suggests that there is some degree of disconnect between the services available to nascent entrepreneurs and more established owner-managers.
- The quality and skill of subcontractors, suppliers and consultants in the province were seen to be high (6.93 points). However, respondents did not find that new firms could afford the services of subcontractors, suppliers and consultants (5.60 points).

Figure 3.8 Support Services Ecosystem Conditions Ranked Scores



- Government services also form two components of the support services pillar. The component that asked individuals whether a wide range of government assistance for new firms can be obtained through a single agency received a below average score of 5.80 points. However, respondents found that government programs were sufficiently tailored to regional needs, with this component receiving a score of 6.22 points.
- When it came to regional agencies, the two components scored below the overall average score. The perception was that there is no impartial agency that exists as a first contact for new firms (5.78). Respondents had a slightly higher opinion of the ability of regional agencies to enable access to national and international support programs for new and growing businesses (6.03 points).

The strength of the support services pillar was driven by the support that was provided to entrepreneurs during the start-up phase. There are potential deficits in support services for established businesses and a perception that Nova Scotia lacks a central impartial agency that serves as the first point of contact for entrepreneurs.

Table 3.7 Support Services Ecosystem Conditions Component Descriptions

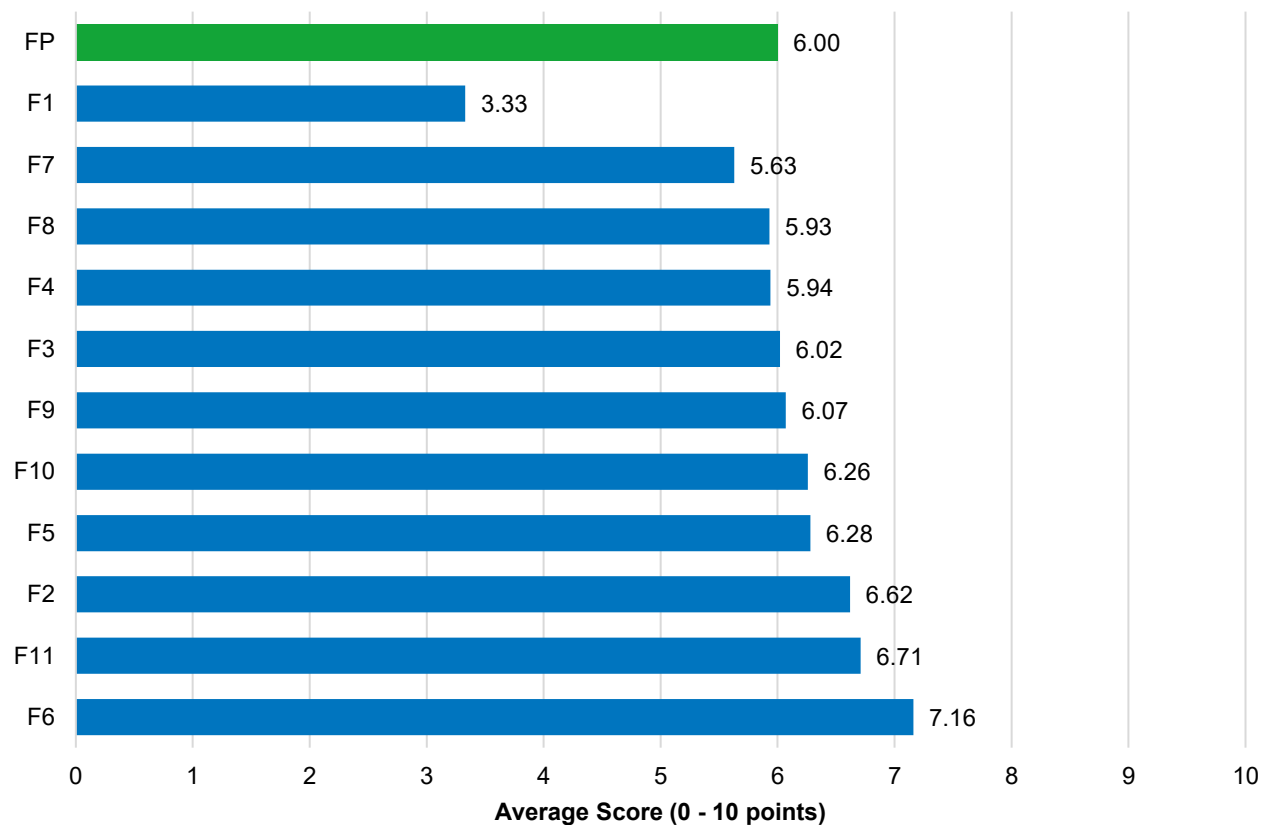
Question	Variables / Indicators	Average Score
SP	Support services pillar overall score	6.17
S4	How strongly was your new business supported by a program in your region which is aimed at business start-ups (e.g., an accelerator or incubator program) (for new and established owner-managers)	7.10
S5	There are enough high-quality subcontractors, suppliers, and consultants to support new and growing firms	6.93
S2	How strongly is your new business supported by a program in your region which is aimed at business start-ups (for nascent entrepreneurs)	6.90
S9	Government programs for new and growing businesses are sufficiently tailored to regional needs	6.22
S1	There are, in general, enough workshops and other training opportunities accessible within your region for accounting, tax and legal issues, business planning, etc. which are usable for your type of start-up (for nascent entrepreneurs)	6.20
S10	Regional agencies efficiently enable access to national and international support programs for new and growing businesses	6.03
S7	A wide range of government assistance for new and growing firms can be obtained through contact with a single agency	5.80
S8	An impartial agency exists as first contact point for entrepreneurs, helping them to find the optimal sources of support for their specific needs	5.78
S6	New and growing firms can afford the cost of local subcontractors, suppliers, and consultants	5.60
S3	There are, in general, enough workshops and other training opportunities accessible within Nova Scotia to learn the business skills you need for your business (for new and established owner-managers)	5.10

3.8 Financing

The finance pillar details the availability of, and access to, capital for nascent entrepreneurs and owner-managers based on different types of financing channels. The finance pillar is formed by 11 original variables. The financing ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.9 and Table 3.8.

- The finance pillar received a moderately low score of 6.00.
- The strongest component of this pillar was that new and growing firms have sufficient access to government subsidies (7.16 points). This indicates that entrepreneurs believe that government funding is accessible.
- The weakest component of the pillar was the situation of informal investors, with this component receiving only 3.33 points, suggesting that informal investment in Nova Scotia is lagging.
- For access to external funding, both nascent entrepreneurs (6.62 points) and owner-managers (6.02 points) reported that they have adequate access to external funding, with both components scores above the pillar average.
- Equity and debt are two other major sources of funding for firms in the Nova Scotia ecosystem. In the component asking about firms' access to debt funding, respondents reported an above average score of 6.28 points. Comparatively, equity funding is not as easily available to firms, with this component obtaining a score of 5.94 points, slightly below the pillar average.

Figure 3.9 Financing Ecosystem Conditions Ranked Scores



- The surveys also considered external investors like angel investors and venture capitalists. In the Nova Scotia ecosystem, the presence of angel investors (5.63 points) and venture capitalists (5.93 points) is beneficial to the local firms in the region. However, when compared to the other components in the pillar, these two components show that there is room for improvement.
- When it comes to obtaining financing for the different stages of the firm's life, the components suggest that funding is obtainable at the pre-start-up phase (6.07 points), start-up phase (6.26 points) and growth phase (6.71 points).

Overall, the finance pillar of the Nova Scotia ecosystem was one of the weaker pillars, tied for the second lowest average score among all of pillars, suggesting that this pillar needs further development. However, on closer inspection, it is the comparison of informal investment in Nova Scotia to the national average that is contributing to the overall low score, when a regional comparison might be more appropriate.

Table 3.8 Financing Ecosystem Conditions Component Descriptions

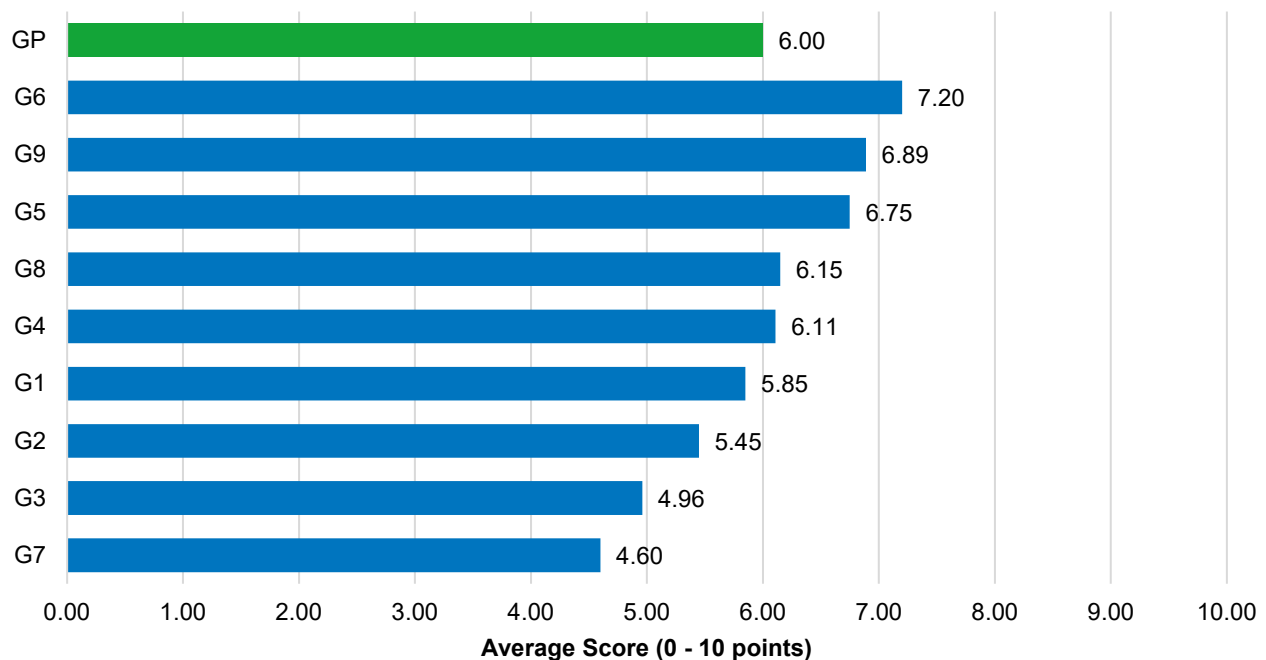
Question	Variables / Indicators	Average Score
FP	Finance pillar overall score	6.00
F6	In Nova Scotia, new and growing firms have sufficient access to government subsidies	7.16
F11	In Nova Scotia, entrepreneurs have sufficient access to funding for business growth	6.71
F2	You feel there are adequate sources of external start-up funding in your region (for nascent entrepreneurs)	6.62
F5	In Nova Scotia, new and growing firms have sufficient access to debt funding	6.28
F10	In Nova Scotia, entrepreneurs have sufficient access to funding for their start-up phase	6.26
F9	In Nova Scotia, entrepreneurs have sufficient access to pre-start-up funding	6.07
F3	You feel there are adequate sources of external start-up funding in your region (for new and established owner-managers)	6.02
F4	In Nova Scotia, new and growing firms have sufficient access to equity funding	5.94
F8	In Nova Scotia, new and growing firms have sufficient access to funding from venture capitalists	5.93
F7	In Nova Scotia, new and growing firms have sufficient access to funding from business angels	5.63
F1	Type of situation about informal investment; assigns a code depending on the value of the regional rate of informal investors/national rate of informal investors	3.33

3.9 Formal Institutions

The formal institutions pillar details the state of support for new business creation from political or governmental institutions as well as rules and regulations affecting start-ups. The formal institutions pillar includes nine variables. The formal institutions ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.10 and Table 3.9.

- The formal institutions pillar received a score of 6.00.
- The highest scoring component was that educational institutes in the region give high priority to providing support to new firms in Nova Scotia (7.20 points). This shows a strong connection between local educational institutions and the Nova Scotia ecosystem.
- In the Nova Scotia ecosystem, government policy components score the lowest. Respondents did not feel like it was easy for growing firms to deal with government bureaucracy, resulting in a score of 4.60 points, the lowest in the pillar.
- In addition, respondents seldom felt that government policies consistently considered new and growing firms (4.96 points). This suggests that government policy and bureaucracy was seen to need the most work, out of all formal institutions,
- Bureaucracy also has a part to play when setting up a new firm. When asked if government bureaucracy was a serious impediment to starting their firm, nascent entrepreneurs responded with a higher score (5.85 points) than new and established owner-managers (5.45 points). This suggests nascent entrepreneurs have an easier time dealing with bureaucracy, while it is a larger impediment to growing businesses.

Figure 3.9 Formal Institutions Ecosystem Conditions Ranked Scores



- Other government services that make up the components of the formal institutions pillar were viewed more favourably. Respondents felt that local government was supporting the local ecosystem and making it a priority, with this component receiving a score of 6.11 points.
- Government programs were also seen to boost the Nova Scotia ecosystem. Respondents largely felt that government programs were easily available to growing firms (6.15 points). Among new firms, support from government programs was viewed more positively, with the component getting a score of 6.89 points.
- The last component pertains to support provided to firms from local Chambers (of Commerce, of Craft, of Industry etc.). This component was positively viewed by individuals, receiving a score of 6.75 points.

Overall, the formal institutions pillar was tied for the second lowest performing pillar. Despite high quality support being provided, challenges around ‘red tape’ dominate the discussion.

Table 3.8 Formal Institutions Ecosystem Conditions Component Descriptions

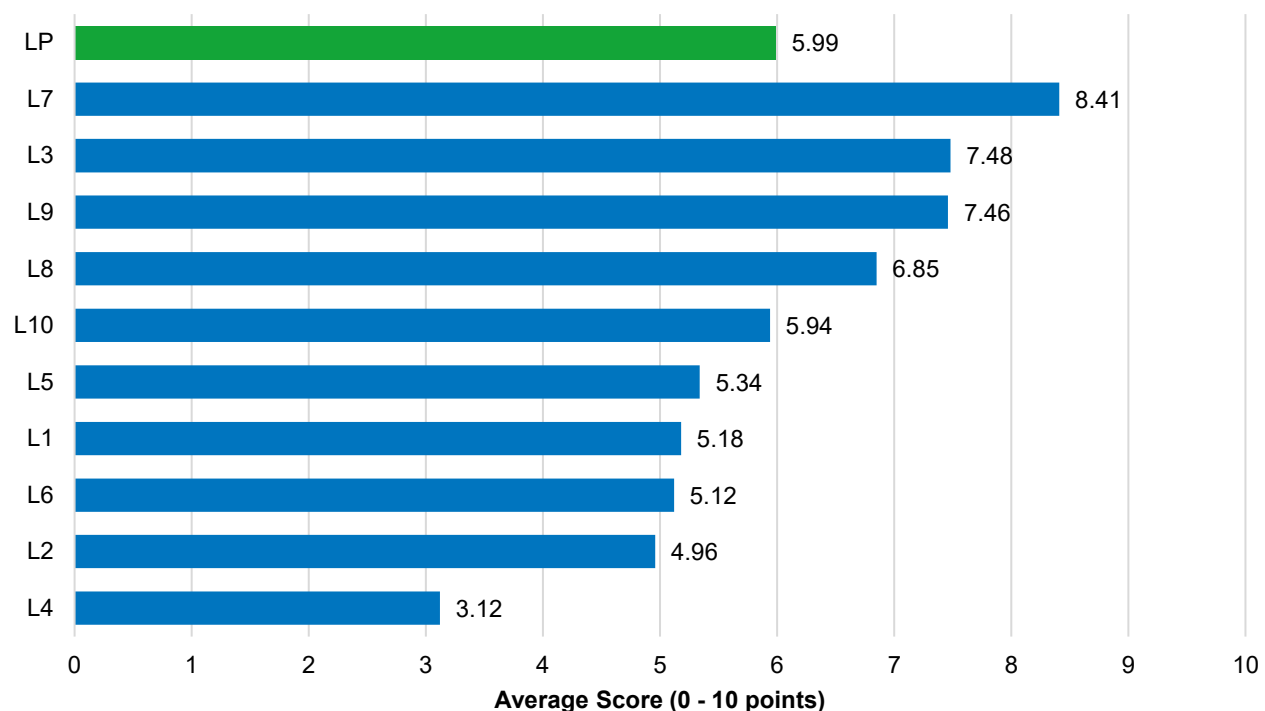
Question	Variables / Indicators	Average Score
GP	Formal institutions pillar	6.00
G6	Support for new and growing firms is a high priority for educational institutions	7.20
G9	Government programs aimed at supporting new and growing firms are significantly improving the chances of survival and success of those firms	6.89
G5	Support for new and growing firms is a high priority for Chambers (of Craft, of Commerce, of Industry, etc.).	6.75
G8	Almost anyone who needs help from a government program for a new or growing business can find what they need	6.15
G4	Support for new and growing firms is a high priority for the local government	6.11
G1	Bureaucracy and regulations you encounter during the founding of your business are NOT a serious problem (for nascent entrepreneurs)	5.85
G2	Bureaucracy and regulations you encountered during the founding of your business are NOT a serious problem (for new and established owner- managers)	5.45
G3	Government policies (e.g., public procurement) consistently consider new and growing firms	4.96
G7	It is extremely easy for new and growing firms to cope with government bureaucracy, regulations and licensing requirements	4.60

3.10 Leadership

The leadership pillar details the state of leadership for the Nova Scotia ecosystem. It covers whether important and influential individuals or teams of entrepreneurs shape the ecosystem. This includes mentoring as well as role model functions, among other aspects. The leadership ecosystem conditions average scores and component descriptions for Nova Scotia are presented in Figure 3.11 and Table 3.10.

- The leadership pillar received a score of 5.99.
- The best performing component for the leadership pillar indicated that there is at least one strong entrepreneurial group that is visible in the Nova Scotia ecosystem. This component attained a very high score of 8.41 points, well above the pillar average.
- The component with the lowest score of 3.12 points asked established entrepreneurs whether they received mentoring from other established firms. Such a low score indicates that there is not a lot of support offered by established firms to other established firms. Nascent entrepreneurs reported that they received a higher degree of mentorship from established firms, with this component attaining a score of 5.18 points.
- Two components of the leadership pillar asked individuals if they partook in mentoring new entrepreneurs. Nascent entrepreneurs reported a lower score (4.96) than new and established owner-managers (5.34). Nascent entrepreneurs may feel like they have little to offer as mentors.
- The presence of leading businesses in a region is a source of inspiration. When asked to what degree the decision to start their own business was strongly inspired by a start-up or business from Nova Scotia, nascent entrepreneurs showed a higher degree of agreement (7.48 points) than new and

Figure 3.11 Leadership Ecosystem Conditions Ranked Scores



established owner-managers (5.12 points). The result suggests that in the Nova Scotia ecosystem is evolving to be more inspirational, with newer firms more inspired than older ones.

- The Nova Scotia ecosystem boasts a large reserve of well-respected mentors that offer help to new firms (6.85 points). Adding to this, respondents reported that they felt public institutions worked together to the benefit of the Nova Scotia ecosystem (7.46 points). By and large, respondents did not feel that there was one institution with disproportionate control over the Nova Scotia ecosystem (5.94 points).

Overall, the leadership pillar had the lowest score of all of the pillars, which suggests that this is the area in the ecosystem on which Nova Scotia needs to work the most. However, upon closer inspection of the components, the challenges mainly arise around the role of mentoring for established businesses.

Table 3.10 Leadership Ecosystem Conditions Component Descriptions

Question	Variables / Indicators	Average Score
LP	Leadership pillar overall score	5.99
L7	In Nova Scotia, at least one strong entrepreneurial group or individual with high economic impact is a visible part of an entrepreneurial community	8.41
L3	Your decision to start your own business was strongly inspired by a start-up or business from your region (for nascent entrepreneurs)	7.48
L9	In my region, public and private organizations cooperate with each other to enhance entrepreneurship in the region	7.46
L8	In my region, there is a broad pool of well-respected mentors and advisors offering support for new and growing firms, acting for the long term rather than pursuing short term financial gain	6.85
L10	In my region, the development of the ecosystem is not constrained due to a single public or private organization or actor having too much power (reversed variable)	5.94
L5	How often do you give advice in the form of mentoring to new business owner- managers? (for new and established owner-managers)	5.34
L1	How often do you receive advice for your new business in the form of mentoring from established business founders in your region? (for nascent entrepreneurs)	5.18
L6	Your decision to start your own business was strongly inspired by a start-up or business from your region (for new and established owner-managers)	5.12
L2	How often do you give advice in the form of mentoring to new business owner-managers? (for nascent entrepreneurs)	4.96
L4	How often did you receive advice for your new business in the form of mentoring from established business founders in your region? (for new and established owner- managers)	3.12

4. COMPARATIVE ENTREPRENEURIAL ECOSYSTEMS

In 2019, Global Entrepreneurship Monitor teams collected data for three ecosystems within Canada and eight other ecosystems globally. While ecosystem comparison is conducted at the sub-national level, there are further considerations when comparing a provincial ecosystem that is larger in scope than a municipal-based ecosystem. For the purpose of comparison, both a municipal (Montreal) and a provincial (Alberta) ecosystem are presented in relation to Nova Scotia (see Table 4.1 and Figure 4.1).

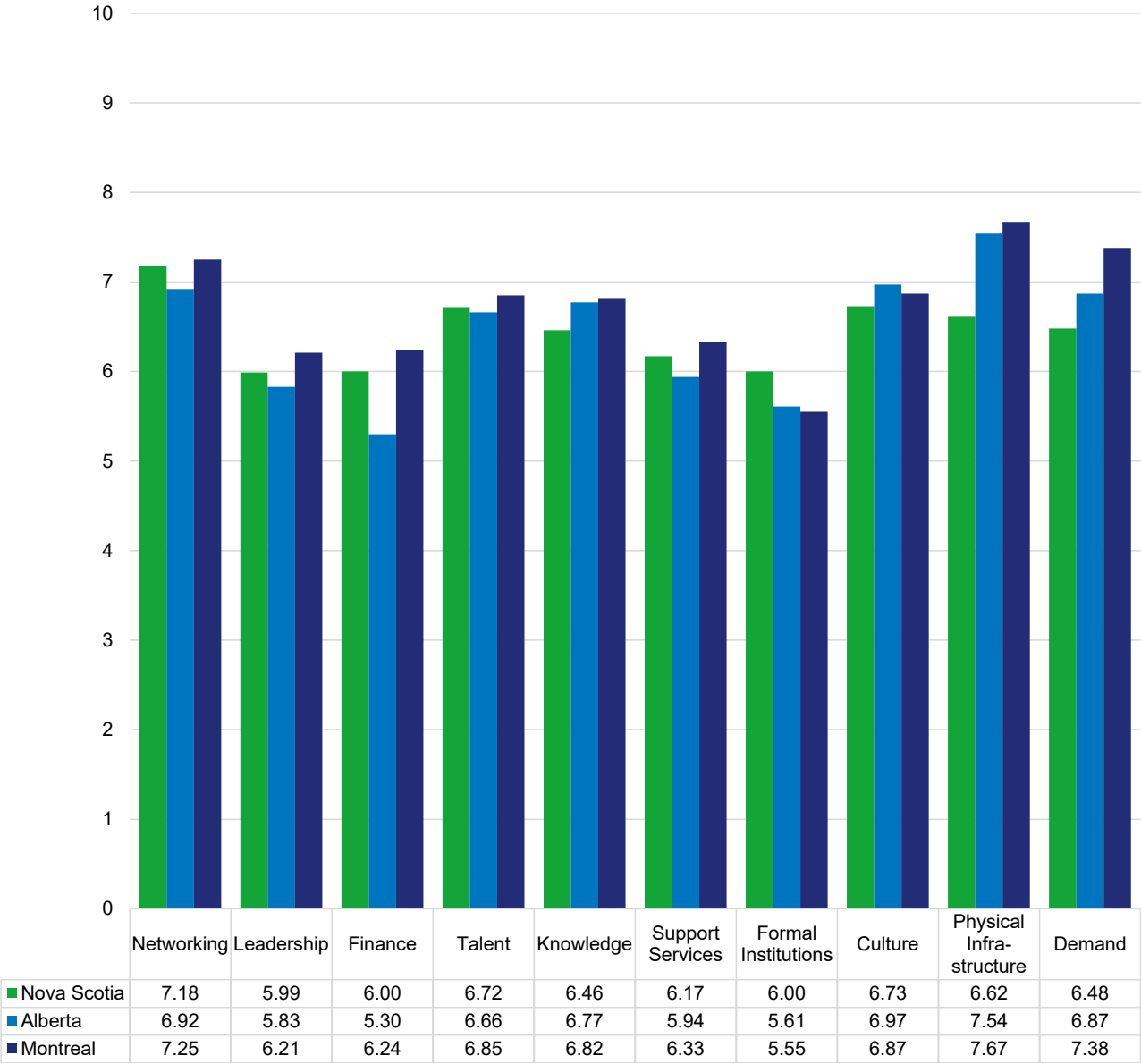
When comparing the Nova Scotia ecosystem to that of Alberta or Montreal, we find that the ecosystem in Nova Scotia is not as strong as the other locations. The only pillar that Nova Scotia outscores Alberta and Montreal in is formal institutions. Nova Scotia lags behind the other two locations in terms of physical infrastructure, knowledge, culture and demand. This potentially identifies pillars where improvements could be directed. Overall, Montreal's ecosystem seems to be the most conducive to new business when compared to Nova Scotia and Alberta. With the highest index score in all three categories, the data suggests that the ecosystem in Montreal is the most developed.

Table 4.1 Nova Scotia in Comparison to Canadian Entrepreneurial Ecosystems

Pillar	Nova Scotia	Alberta	Montreal
Networking	7.18	6.92	7.25
Leadership	5.99	5.83	6.21
Financing	6.00	5.30	6.24
Talent	6.72	6.66	6.85
Knowledge	6.46	6.77	6.82
Support services	6.17	5.94	6.33
Formal institutions	6.00	5.61	5.55
Culture	6.73	6.97	6.87
Physical infrastructure	6.62	7.54	7.67
Demand	6.48	6.87	7.38
ESI indexes			
ESI_SC (index on systemic conditions)	6.50	6.50	6.81
ESI_FC (index on framework conditions)	6.33	6.35	6.58
ESI (composite index on ES quality)	6.40	6.41	6.67

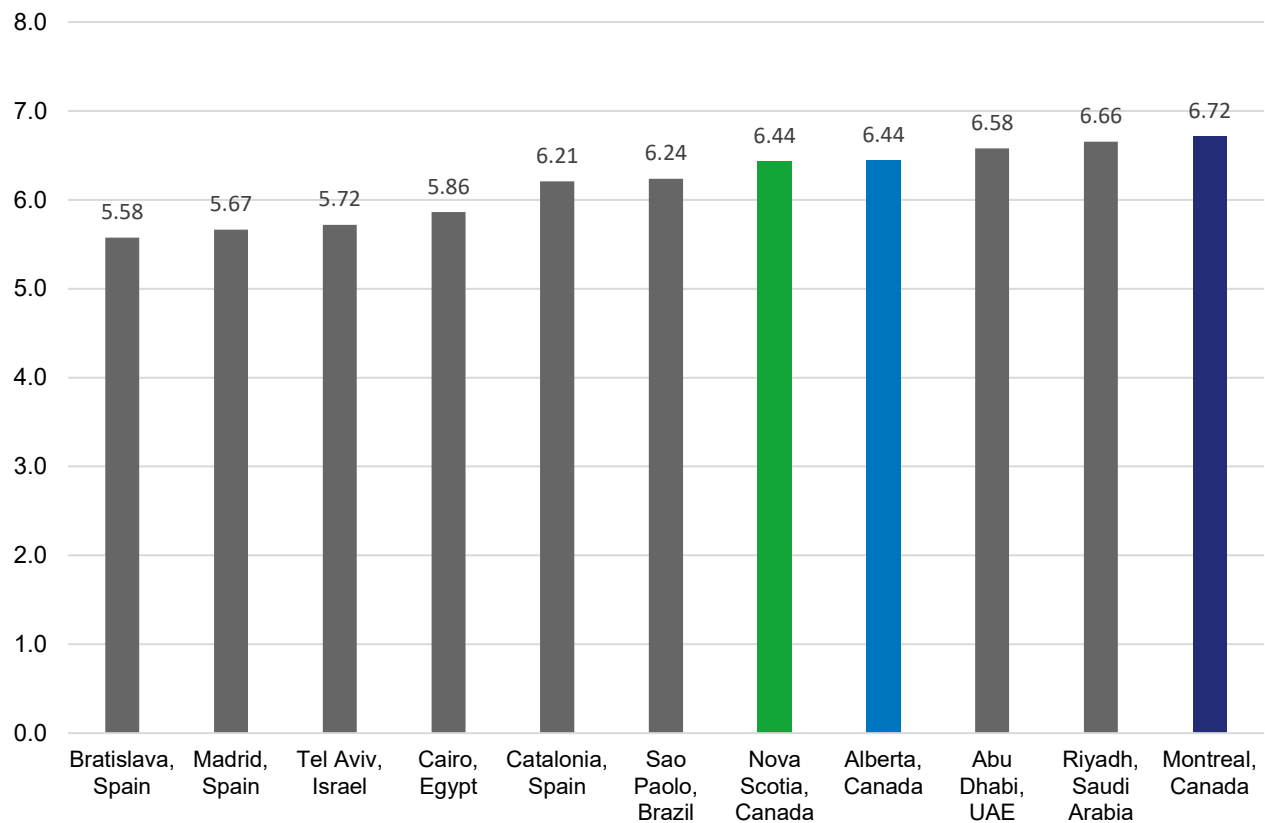


Figure 4.1 Leadership Ecosystem Conditions Ranked Scores



In addition, international comparisons are provided to illustrate the breadth of ecosystem component scores, without providing a depth of analysis in relation to Nova Scotia since arguably these international regions differ so greatly from the Nova Scotia context that detailed comparison is of limited value (see Figure 4.2). Positioned within an international context, the Nova Scotia ecosystem is comparable to Catalonia and is exceeded by Abu Dhabi, Riyadh and Montreal when considered in the context of the ecosystems evaluated in 2019.

Figure 4.2 International Ecosystem Index Scores in Comparison to Nova Scotia





5. RECOMMENDATIONS AND CONCLUSIONS

The findings from this study provide a useful diagnostic tool for policy makers. They substantially extend the level of analysis upon which interventions can be planned and success evaluated. However, while the Stam ecosystem model (Figure 1.3) provides specific causal connections between the components of the ecosystem, it is not prescriptive in terms of recommendations. This is, in part, due to the diagnostic nature of the model, which helps identify symptoms without necessarily pointing to root causes. In addition, the overall strategy policy makers identify for a region guides how to interpret the findings. Simply because one region scores low on a specific ecosystem condition does not, in itself, necessitate concern or attention.

The Ecosystem Index (ESI) for Nova Scotia was 6.40, which compares favourably to other Canadian provinces like Alberta (6.41) but is slightly under the municipal score for Montreal (6.67). Overall the entrepreneurial ecosystem in Nova Scotia is quite robust. However, an examination of the individual components of the ecosystem pillars points to areas of strength to build upon and areas where further policy attention would likely pay dividends.

Recommendation 1: Engage established businesses.

Networking is a strength of the region, especially in the context of nascent entrepreneurs. This appears to reflect the significant efforts of the region in fostering new businesses and easing the burden of start-up. Like other regions, Nova Scotia no longer has a ‘start-up’ problem as that community is quite robust; rather, it is the established businesses that appear to be falling through the cracks. There is an opportunity to offer more tailored programs for firms that successfully graduate from the start-up phase. This would be viewed favourably in the region where an entrepreneurial culture is well established. Continued help for entrepreneurs through the entire business lifecycle is a logical extension of current efforts.

Recommendation 2: Adopt a multipronged approach to talent pool retention.

Nova Scotia’s talent pool is healthy and producing the right talent in the right quantities. This is a significant strength since most ecosystems struggle to source talent internally. However, opportunities exist to retain talent produced in the region. Having a region’s talent in demand from other jurisdictions demonstrates that a region has qualified individuals with skills that the market needs. Although there are benefits for some movement in this regard (i.e., for experience with business practices and norms outside the province), retaining talent is important to support

regional competitiveness and local access to talent. Policy attention on the retention of talent could be directed at maintaining connections with individuals that leave to expand the region’s networking reach, providing a mechanism for individuals/firms that leave to easily return to Nova Scotia, and ensuring there are incentives to remain in the province.

Recommendation 3: Foster inter-provincial and international reach.

The Nova Scotia ecosystem benefits greatly from local demand for innovative products and services. However, accessing markets outside the region is more challenging. Continued policy attention on easing inter-provincial trade barriers (actual or perceived) and facilitating international trade in services (in addition to products) would build upon this existing strength.

Recommendation 4: Consolidate entrepreneurial leadership.

This recommendation integrates strengths around support services, formal institutions, and finance in the region. Mentoring among nascent firms is a strength of the region. But if the policy intent is to help firms scale their businesses, then providing entrepreneurial leadership to consolidate mentoring and angel investment for established businesses is required. Nova Scotia would benefit from initiatives focused on end-to-end ‘red tape’ reduction.



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About the Authors



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Kevin McKague is the Canada Research Chair in Social Enterprise and Inclusive Markets and an Associate Professor of Entrepreneurship and Strategy at the Shannon School of Business, Cape Breton University. Kevin has served on the Global Entrepreneurship Monitor's Canada research team since 2016. Kevin's research interests include entrepreneurial ecosystems, social enterprise business models, inclusive markets and social franchising. His work has been published in numerous practitioner reports as well as in *California Management Review*, *MIT/Sloan Management Review*, *Innovations*, *Stanford Social Innovation Review* and the *Social Enterprise Journal*. Kevin is also the author of *Making Markets More Inclusive* (Palgrave, New York). Kevin has an MBA and a PhD from the Schulich School of Business and an Honours Bachelor of Arts & Science from McMaster University.



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Leslie J. Wardley is an Associate Professor of Marketing in the Shannon School of Business and a SSHRC Exchange University Research Chair in Social Determinants of Health at Cape Breton University. Leslie's research includes exploration of targeted consumers through identification of their preferences, motivations, and buying behaviours. Thus, her research advances our knowledge regarding the psychology of how consumers select between alternative options (e.g., products, suppliers and brands), how consumers are influenced by their environment (e.g., culture, family, technology, and living arrangement), and determinants of consumer motivation and decision-making strategies. Leslie's Ph.D. (Laurentian University) garnered an award for the best Ph.D. dissertation in Canada (2015) bestowed by the Canadian Society for the Study of Higher

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Chad Saunders

Chad Saunders is an Assistant Professor in Entrepreneurship & Innovation at the Haskayne School of Business, University of Calgary, where he is the Academic Coordinator for the Embedded Certificate in Entrepreneurial Thinking. Chad holds adjunct appointments with the Department of Community Health Sciences and the Department of Medicine at the Cumming School of Medicine, where he is the eHealth Services and Strategy Lead with the healthcare innovation incubator w21c.org. Chad received both a BSc (Applied Mathematics) and MBA from Memorial University of Newfoundland and a PhD (Management Information Systems) from the Haskayne School of Business. Chad also holds the ICD.D designation from the Institute of Corporate Directors. Chad has developed and taught various courses in entrepreneurship, innovation management, information

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