Barriers to Advancing High-Growth Women Entrepreneurs and Founders

By

Jessi Gillis

A Thesis Submitted to

Sant Mary's University, Halifax, Nova Scotia

In Partial Fulfillment of the Requirements for the

Masters in Technology Entrepreneurship and Innovation

Halifax Nova Scotia

November 18, 2022

Approved: Claudia De Fuentes
Associate Professor, Saint Mary's University
Supervisor

Approved: Mahdi Tajeddin
Assistant Professor, Saint Mary's University
Reader

Approved: Susan Trenholm,
Dean of Professional Studies, Mount Saint Vincent University
External Examiner

Date: November 18, 2022

Barriers to Advancing High-Growth Women Entrepreneurs and Founders

By, Jessi Gillis

November 18, 2022

Abstract: The main aim of this thesis is to analyze three different areas of policy-making that are essential to supporting women in entrepreneurship and innovation. Namely, political priorities, policy design and implementation, and networks. In this thesis, I argue that the Canadian government needs better capacity for policy-making, and to do so must be informed of important barriers and drivers that impact women entrepreneurs and founders success. The literature review suggests that women founders and entrepreneurs are not being considered first, nor has the Canadian political agenda for increasing participation in entrepreneurship and innovation been developed with a gender bias towards women. This thesis uses a two-stage case analysis method and conducts interviews with twenty-four high growth women entrepreneurs and founders. The findings reveal that women entrepreneurs and founders continue to experience the same constraints, such as, access to financing, education, networking, and industry support. The main implications of this study suggest new barriers not yet researched that exist for women entrepreneurs and entrepreneurs in Canada. This work will inform new policy design and increase the strength of policy implementation to further the Canadian federal priority of advancing women in entrepreneurship and innovation.

Contents

Chapter 1. Introduction

The main objective of this study is to explore the continued barriers to success for women entrepreneurs and founders, by studying the impact of three respective areas that either act as a positive driver, or as layer barriers to success for female founders and entrepreneurs. The Canadian government needs capacity to develop new policy making and to do so must be informed of these important barriers and drivers for success. Women are not being considered first, nor has the political agenda on increasing entrepreneurship and innovation been developed with a gender bias towards women. This thesis uses a case analysis method to inform primary research, and interviews with twenty-four female founders. Access to financing, education, expertise, mentorship, and coaching and to a strong social network, such as family, frontline program managers and advisors, friends and peers. The study highlights the relevant factors indicating an ongoing bias prevalent in the entrepreneurship and innovation ecosystem and presents recommendations on how to improve the landscape for women founders and entrepreneurs.

Brush (2012) stated that women-owned businesses are one of the fastest growing entrepreneurial populations in the world. They significantly contribute to innovation, employment, and wealth creation in all economies (Brush et al., 2006). However, women continue to be drastically underrepresented in entrepreneurship and high-tech industries compared to their male counter parts. The McKinsey Global Institute report has estimated that the low participation rate by female entrepreneurs and innovators may cost the global economy

$28 trillion of unrealized gains (Desjardin, 2018). In addition, these estimations project that if women had equal representation in all labour markets, GDP would increase to about $136 trillion by 2025 (Desjardin, 2018). In Canada alone, the McKinsey (2019) study estimates that advancing equality for women entrepreneurs has the potential to add $150 billion in incremental Gross Domestic Product (GDP) by 2026. This represents a 0.6% increase in annual GDP growth, the equivalent of adding a new financial services sector to the economy, with provincial growth between 0.4% and 0.9% each year.

Given the research executed in the last two decades on gender in entrepreneurship, it is surprising that women continue to face the same consistent barriers to either ideating, launching, scaling, or acquiring a business. The research executed at the intersection of gender and entrepreneurship demonstrates that the phenomenon of entrepreneurship is deeply gendered, as sighted by Ahl (2006). The Growing Your Own Way Report, produced by the Brookfield Institute of Canada in 2020, identifies several reoccurring challenges faced by women entrepreneurs: Resource utilization and access, access to financing, structural, and institutional constraints which include family pressures and the division of labour, cultural limitations, and gender limitations (De Latt, 2020).

Marlowe and Swail (2013) argue that “Prevailing analytical research and methodological conservatism in the mainstream entrepreneurship research does little to provide in-depth, theoretical insight to advance our critical understanding of women’s experiences in entrepreneurship. Moreso, the experience and factors that either act as success drivers or barriers. Many studies that focus on barriers to entrepreneurship and innovation have failed to

acknowledge the specificities and contextual characteristics that impact female versus male entrepreneurs in a different form.

The structural barriers experienced by women entrepreneurs and founders are long-standing. These main barriers have been defined in the entrepreneurship literature over the last fifty years and include, but are not limited to: Access to financing, access to education, access to expertise, access to mentorship, access to coaching, and access to a positive social network. A women entrepreneur and founders' social network is defined in this study as family, friends, and peers that are in direct contact with the female founder during the entrepreneurial or startup journey. Zainddin et al. (2017) reported that through participation in entrepreneurship, a women's role in developing countries, such as Malaysia has changed into a key economic contributor, and that women outnumber men in education. However, women entrepreneurs in Malaysia are still faced with the same constraints as stated above. In developed countries, women entrepreneurs and founders face similar constraints as reported of those living in developing countries. First and foremost, women are more likely than men to be self-funded, having to use personal sources of finance to start their businesses, whereby men have easier access to angel investors, and family and friends' round of financing (Black, 2022).

Hechavarria (2016) suggested that women entrepreneurs and founders have unique ways of conducting business that differentiates from the masculine origin of the entrepreneurial idea where women often show a high willingness to focus more on goals with a higher social value over solely economic goals to achieve responsible, sustainable development. In addition, research suggests that women-owned businesses are less financially successful than businesses

owned by men (Marlowe & Swail, 2013). These two examples call to attention the need to address gender in entrepreneurship and the need for a better diversity and inclusion study from a women gendered lens. Historically, Goffee (1983) argued that the real potential for the growth of small business lies with woman who have a low attachment to conventional roles, such as 'innovators' whose willingness is to compromise with the male business world and to sacrifice personal and family relationships for the sake of their enterprise which enables them to overcome many of the obstacles which women face.

Entrepreneurship success has been defined in literature as a combination of economic and subjective measures (Hiemstra & Frese, 2006), whereas McCormack (2003) noted through her research that women entrepreneurs and founders are operating in a space where they are being asked to conform their business ideals and personal definition of success in business. Duberly et al. (2018) and Marlow et al. (2018) found that new entrepreneurial subjectivities such as 'mumpreneurs', 'female founder', and 'girlboss' are not reflected in any corresponding male-gendered identities. Furthermore, the habitual use of a feminized marker to distinguish the conversation on women entrepreneurs from entrepreneurs in general, underscores that masculinity is the default position Lewis (2014). As such, even the way that the use of the term 'female entrepreneur' is needed to reference female founders and entrepreneurs suggests a strong difference between male and female roles in business historically and at present.

We will not achieve equality in entrepreneurship through advising women to change their values and relationship to business creation and growth. Rather than requesting changes from female founders to operate like male entrepreneurs, the global entrepreneurship and innovation ecosystem

should look at success drivers and the current barriers to success from a policy perspective. There is a continued need to re-orientate success factors through applying a consistent bias toward women. Therefore, as sighted by Okrah (2018) the need to further identify the barriers to success and why technology startups succeed is of value for the different agents that are part of the startup ecosystem.

In 1996, women were noted as being at the forefront of the engine of economic growth in Canada (Adrien, 1999). Fast forward to 2022, the Canadian government is contributing to specific venture capital funds operating solely to support women founders. For example, Sandpiper Ventures is the newest venture capital fund based in Atlantic Canada investing in female founders, through a feminist lens nationally. Sandpiper has made an operational choice to look at additional variables of evaluation, in addition to the standard code when considering CEED stage investment in a firm. Sandpiper Ventures is considering high-growth firms versus only technology enabled firms to open an opportunity for consumer goods businesses and innovative driven retail businesses using technology. This will enable new access to financing for women founders while in tandem giving women entrepreneurs and founders access to c-suite mentorship. The mentorship program will deploy new growth opportunities through national and global markets. Roos (2019) suggested that linking gender and embeddedness elicits a new take on how female entrepreneurship networks are constructed and how they could advance gender equality within entrepreneurship.

The research executed by the Women Entrepreneurship Knowledge Hub, in partnership with the Brookfield Institute for Innovation and Entrepreneurship, details that inclusive opportunities and

new inroads for female entrepreneurs start with a shared understanding of the engrained biases built into the entrepreneurship and innovation ecosystem in Canada. There are unique and systemic barriers engrained in the culture and Canadian approach to business launch and scale for women entrepreneurs and founders. To action change, there will have to be education and understanding of the continued barriers that exist today, to inform the right short, medium, and long-term solutions. The opportunity exists to transform the innovation landscape and reform embedded biases with the policymakers, financial institutions, post-secondary institutions, and support organizations. This is an important means of increasing women's overall inclusion in the labor force and ensuring that Canada benefits from the innovations women have to offer (Taylor, 2021).

In 2018, the Canadian Federal government launched the Women Entrepreneurship Strategy and stated that there was a long road of work ahead to advance women founders and to find equality in entrepreneurship and innovation (WBE Canada, 2018). The government of Canada has publicly stated that it is committed to, through the Women Entrepreneurship Strategy, growing the presence of women entrepreneurs with a public goal of doubling women-owned businesses by 2025.

The Women Entrepreneurship Strategy was launched under Budget 2018, representing more than CAD$6 billion commitment to investment towards economic empowerment through advancing women entrepreneurs. To date, the Canadian Federal government has invested just over CAD$100 million through this fund. This includes three different calls for proposals launched between 2021-2022. Each of the calls for proposals focused on a particular area of support to strengthen capacity within the entrepreneurship ecosystem and close gaps for diverse, intersectional, and underserved

women. The study suggests that increasing women-owned businesses gives them access to financing, talent, networks and expertise tailored to support the growth of their business (Government of Canada, 2018).

Technology startups are important engines for regional job creation (Sulayman, 2014). The Atlantic Canadian 2021 Entrevestor Report states that one-fifth of startups are led by women in Atlantic Canada (Moreira et al., 2021). The total funding in 2021 raised the proportion of attributable funding to female founders has never reached above 8%. Women entrepreneurs in Canada positively impact economic growth and society. However, the business incubation and acceleration framework, valuation of success, and key performance indicators currently embedded in government-supported programs across Canada, operate with a bias toward male entrepreneurs (Taylor, 2021). There are still unknown factors that have been overlooked or under-researched, contributing to the barriers to success for female founders. According to Bulchand-Gidumal (2021), there are no integrated models that consider all the factors that might make a technology startup successful from a specific gender lens. Thus, this study seeks to address this gap and examine what specific factors play a supportive role in helping advance women entrepreneurs and founders examine those factors that are related to political priorities, a policy perspective including design and implementation and social networks. Borras (2019) shared that a new approach to policymaking aims to create a broader and sustained condition for problem-solving. This type of global governance architecture is a concept that has evolved through new types of initiatives. There must be a new way of approaching policy making at a global level. There remain key themes associated with these three factors that represent strong barriers to success for women entrepreneurs and founders.

To advance the current research and the key factors in ongoing constraints experienced by women entrepreneurs and founders. I would suggest that there are alternative barriers that have been under-researched holding women entrepreneurs and founders back, such as the relationship with front-line innovation advisors and program managers. The Canadian government is seeking knowledge and recommendations on how to mobilize increased capacity for new policy-making to inform solutions to barriers for women entrepreneurs and founders. As such, my study defines one key objective:

1) To examine the continued factors deterring the success of women entrepreneurs and founders to inform the current research and identify new barriers not yet explored at length through the academic literature.

To address the objective of this study, I first conducted a literature review to help inform the historical and current barriers to success experienced by women entrepreneurs and founders. The literature review suggested consistent system-wide barriers and highlighted many root causes associated with perpetual barriers to success experienced by women. The three identified factors have a multitude of themes and in some circumstances, the research is limited to sub-topics. The subtopics connect to each theme and have constraints that limit success or growth for women entrepreneurs and founders. The three main factors with associated themes identified during the literature review informed the unit of analysis for this study and are anchored under the framework of innovation and entrepreneurship policy: political priorities, government policy (design and implementation), and social networks.

The literature review was used to design the research methodology approach, which is a case study approach based on in-depth interviews with female founders and key actors working in the innovation ecosystem in Atlantic Canada. To inform the case study design, I gathered primary research over a nine-month period and worked with a third-party interviewer to hear directly from female founders in Canada. The geography of the respondents constrained the case analysis, as I invited specific respondents that had been classified as high-growth founders operating in the innovation and entrepreneurship ecosystem in Atlantic Canada. The founders represented diverse industries and were operating at differing stages within their startups. To inform my analysis and recommendations, I coded the interviews and information derived from each working group session to identify key themes.

The results of this research seek to contribute to, and influence:

1) Recommendations for new and adapted policy, to build more inclusive entrepreneurship and innovation ecosystem through funding, programming and grants.
2) Recommendations on how government, policy makers, front-line workers and the social network of female founders can continue to remove barriers to success for female founders and entrepreneurs.

There are several implications and contributions of this study. First, I gathered secondary research through applying for a comprehensive literature review. Following this, over a nine-month period I engaged key stakeholders working in executive level positions and management positions in the innovation and entrepreneurial ecosystem in Canada. I used the case analysis method to collect primary research from a total of twenty-four high growth women founders

operating in Atlantic Canada. The interviews were coded by themes. The key findings and recommendations will be used to influence and inform new policy development in the Canadian government's commitment to advance women in entrepreneurship and innovation. The key elements discussed in the findings can help policy, design and implementation, and make connections to skilled training and education gaps that will influence new opportunities for a better peer-to-peer and social network for women entrepreneurs and innovators.

Chapter 2. Literature Review

2.1 Introduction Literature Review

The literature review portion of this thesis called to attention the need for further commitment and different work to advance women entrepreneurs and founders. The literature informed both historical and current barriers still prevalent today with attachment to how policy is developed, political priorities are informed, and social networks either limit or advance women entrepreneurs. Moreover, the information collected provided the foreground and set the foundation for the Unit of Analysis.

2.2 Hypothesis

My hypothesis will be critical for ongoing improvements to inform new, inclusive policy development. My hypothesis is that although there there are alternative barriers to success that have been under researched. This study aims to explore three main constraints identified during the literature review that informed the unit of analysis for this study: Political Priorities, Government Policy (Design and Implementation), and Social Networks. In addition, the case analysis will provide firsthand experience from women entrepreneurs and founders. As Xie

(2022) shares, opportunity recognition mediates the relationship between responsible entrepreneurship and female entrepreneurial success.

2.3 Entrepreneurship and Innovation Criteria

An extensive literature review of over 125 papers was executed to inform secondary research on the global and national environment to advance women entrepreneurs and founders' success. Research has shown that the definition of growth and key performance indicators such as success targets do not apply to one standard of metric tracking (Hirdman, 1988). Furthermore, as sighted by Ogbor (1980), when it comes to the entrepreneurship discourse, the hierarchy in gender structures is seen in how a feminine perspective becomes positioned as subordinated. This analysis is still a true reflection of the barriers to success for women entrepreneurs and founders.

My secondary literature review integrated information on pre-determined barriers to success and key indicators as defined by the innovation and entrepreneurship ecosystem. The literature indicated the key barriers to success associated with three main themes: political priorities, government policy (design and implementation), and social networks. Each of these themes can either act as a constraint or an opportunity when considering the intersectionality to how women entrepreneurs and founders advance in their entrepreneurial and innovation journey. In addition, the literature review was derived from content through diverse reports and academic sources. A key focus of the extensive literature review was to find several defined barriers to success for female founders in high growth startups at varying stages (Taylor, 2021; Marlow et al., 2018).

The Organization for Economic Co-operation and Development (OECD) defines a high-growth firm as, a company that has an average annualized return of at least 2% in the past three years

with at least 10 employees at the beginning of the period (OECD, n.d). It is important to note that there are other definitions shared within the ecosystem. The One Nova Scotia Coalition (2014) defines high-growth firms as An enterprise which has an average annualized growth in revenues of greater than 20 percent per year over a three-year period (72.8 percent growth over three years), and at least 10 employees at the start of the three-year period. High growth firms are often analogized as gazelles: fast-growing companies that are less than five-years-old (Ivany et al., 2014)

During the literature review, I found different definitions of innovation that are used to inform new policy development. For example, the concept of "innovation" as described by the early work of Schumpeter (1911), is the economic impact of technological change, as the use of new combinations of existing productive forces to solve a problem. Alternatively, Urabe (1988) suggests that innovation consists of the generation of a new idea and its implementation into a new product, process, or service, leading to the dynamic growth of the national economy and the increase in employment. In this study, we use the basic definition of business innovation from The Oslo Manual for Measuring Innovation (2018, p. 32): "A business innovation is a new or improved product of process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market of brought into use by the firm . I will use this definition, because, as described by OECD Eurostate (2018), this definition is neutral in nature and captures how developed ideas can become the tools that transform organizations, local markets, countries, the global economy, and the very fabric of society.

To inform the link between innovation and entrepreneurship for females in high growth businesses, it was important to look at the different definitions of entrepreneurship. Whereby the definition of entrepreneurship can range from a focus on a business start up to a skillset or mindset that uses entrepreneurial traits and characteristics to pursue and action ideas (Davis et al., 2016). Udin et al. (2017) suggested that entrepreneurship embodies methods for thinking, acting, identifying opportunities, and approaching problems that enable people to manage change, adjust to new conditions, and to take control of actualizing personal goals and aspirations. History has shown that the advancement of entrepreneurship and the entrepreneurial mindset has a direct correlation to innovation and, in turn, economic growth as well as community and social advancement. The approach to entrepreneurship applied to this case study analysis is entrepreneurship as a result, where the focus is on the outcomes of entrepreneurship (Van de Ven, 2004). This approach as described by Van de Ven (2004), examines events and outcomes from venturing such as new firm formation, innovation, job creation, growth, IPO, and receiving investments such as bank loans or venture capital.

The literature reviewed indicates a correlation between the adoption of an entrepreneurial mindset and how individuals activate a startup. The development and growth of the existing business is a process with many societal benefits, including job and wealth creation and the advancement of innovation (Tang, 2009). While some entrepreneurs are pleased to be self-employed in a small-scale business, others have growth aspirations for their ventures (S., 2009). An entrepreneur's decision to grow their business is complex and is neither linear nor dependent on a limited number of factors (Miller et al., 2013). Entrepreneurship and innovation personality traits for individuals leading high growth businesses and deep technology start-ups are

interrelated. Although, some research indicates that there are strong differentiating factors between small to medium-sized businesses and deep technology founders. However, at the core, entrepreneurship and innovation are both co-related to economic growth and have touchpoints with policymaking, government investment in institutions and community-led incubators working to fuel entrepreneurial mindsets (Laguia et al., 2021). Therefore, the literature review conducted for this study has analyzed the constraints and barriers for those women entrepreneurs and founders defined as high growth operating in the entrepreneurship and innovation ecosystem. For context, the entrepreneurship and innovation ecosystem has been defined as an interactive network of actors who influence each other and the chances of survival of a venture creator and his company in a region or company (Entrepreneurial Ecosystem and the Role of the Entrepreneur, Driessen, M. (n.d.)

2.4 Gender differences

In relation to gender, feminist theory has presented several perspectives (Mirchandani, 1999). For the purpose of this case analysis, I applied one approach treating gender as a variable, often operationalized and measured as biological sex, also known as liberal feminism or feminist empiricism. This approach often coincides with a focus on differences and similarities between men and women (Calas, 2006).

We understand that gender is always present when people act and interact (Zimmermand et al. 1987). Consequently, gender is present in all stakeholder relationships for female entrepreneurs. To inform the history of gender bias, research has studied the concurrent challenges experienced by women. Research focused on women in internships between the late 1980s and 2000

demonstrates that women are still challenged by traditional stereotypes that want women to prove themselves. Zainuddin (2017) suggests that in the 21st century, the dimensions of challenges faced by women entrepreneurs are related to discrimination actions displayed by society especially in giving them opportunities and encouragement to explore the entrepreneurship field.

Contrary to women's challenges, men tend to have easy access to education, business, family and financial support and their businesses are growth driven and perform very well financially. As discussed by Cassar (2006), women entrepreneurs had different growth intentions than men. The traditional models of startup growth are based on the fact that all founders seek to achieve the same success through business growth, which is not always true for women (Morris et al., 2006).

Much of the research presents male founders reaching higher growth rates sooner than female founders, with women owned businesses remaining smaller than male owned (Eddleston, 2008). Most of the identity-based research focuses on the different levels of start-up activity between male and female founders not the founder's individual definition of success or growth as found by Cliff (1998), Coleman (2016) and Davis (2012). We know that little research has examined the growth aspirations of ventures led by women and the matching pre-defined success metrics (Leonidas et al. 2016). Compared to male entrepreneurs, female entrepreneurs tend to pursue non-economic goals such as balancing work and family roles and have preferences for employee relationships and society satisfiers which in turn may detract from economic performance or growth (Eddleston, 2008; Jennings, 2013). This combination of blending work, homelife and

personal values into business separates women founders from the normative representations of success in entrepreneurship, which are dominated by masculinity (Henry, 2016).

Clance and Imes (1978) found that in relation to entrepreneurship and innovation, women consider themselves unworthy of their success and feel that their achievements are a fluke. After more than two decades of research the current landscape continues to show bureaucracy, a longstanding bias towards men and ongoing barriers to success for female founders. This is an important consideration, in 2018, Swati suggested, at present we know what ails women entrepreneurship, but we need more evidence about what makes women entrepreneurship work. Policymakers must be cognizant of the barriers but more focused on the success enablers to encourage continued progress. There are a number of contributing factors that hinder the self-esteem and the potential success or advancement of women innovators.

2.5 Barriers

The Global Entrepreneurship Monitor (GEM) indicates that women entrepreneurs create, run, and grow businesses in all industries. However, the number of women that start businesses out of necessity is at least thirty percent greater than the number of men who do so (Kelley, 2017), while women entrepreneurs in digital and technology ventures are almost nonexistent, thereby depriving women access to one of the fastest-growing markets worldwide (Commision, 2019). In fact, as shared by Vu (2021), any gendered discussion of entrepreneurship is understood as meaning the study of women only, indicating gender as a category to be problematized or maybe even the problem itself (Marlowe & Swail, 2013).

One key barrier is accessing the right support at the right time. There is an engrained bias associated with what industries women entrepreneurs and founders should be operating in. Hoang (2010) argued that gender identity shapes the way entrepreneurs view themselves, how they understand the world around them and approach other people, and also what they aim to achieve in the future. The research suggests that male and women advisors use male norms when working with women founders. The advisor who works on the front line interacting daily with women entrepreneurs and founders, may use male norms to judge women's activities through merely comparing men and women with little or no attention paid to constructions of gender as stated by Ahl (2012) and Lewis (2006). Not differentiating between genders, puts women founders at an automatic disadvantage to their male counterparts who have incorporated their definition of business growth into the masculine mindset (Eddleston, 2008). The programs that finance the female entrepreneurship network are reinforcing gender structures by deciding how entrepreneurship is supposed to be measured and by how the women who join the group enact this measure (Ross, 2019).

The masculine frameworks embedded in the innovation ecosystem are not working to the female advantage. Duetsch (2007) cited that is a need to acknowledge the interplay of the gender process with different social processes. Women founders do not just experience barriers within the constructs of their industry and business launch and delivery process. Thus, means the female entrepreneurs and founder must operate under a difficult two-sided control. The first of these controls is figuring out how to operate in a male dominated entrepreneurship, innovation driven sector that holds a long existing bias toward men. The second control is attached to the founder's social network and forces the female entrepreneur and founder to identify an approach on how to

convince friends and family for personal support, as the female founder goes against a different direction societal norm (Goyal & Parkash, 2011)**.** Women entrepreneurs and founders encounter a lack of family support, juggling between work and family and the complexity of various roles. Moreover, the literature suggests that women continue to be defined by the government, universities, and industrial platforms under the long-standing male norms engrained in entrepreneurship and innovation.

Table 1 represents a further developed version of the analysis of literature on women challenges in entrepreneurship identified through research from the late 1980s until 2000, as presented by Zainuddin et al. (2017). The updated table presents the challenges faced by women entrepreneurs and founders in the 1980s–2000s and the 21st century. I have updated this table to reflect the most recent biases published in gender and entrepreneurship-focused literature through three main themes: Political priorities, government policy (design and implementation) and social networks.

Table 1. Literature Analysis 1980's – 21st Century

Key Themes	Key Constraints	Literature 20th Century & 21st Century
Political Priorities	Gender-discrimination	Women are faced with gender discrimination and gender stereotyping (Commonwealth Secretariat, Dionco-Adetayo, et al. 2011). The construction of entrepreneurship as a 'masculine' activity marginalizes female entrepreneurs. Despite recent studies' appeals to highlight the representation of traditional "feminine" characteristics in entrepreneurial activities (Bryne et al., 2019; et al., 2019).

		Feminist theory, which argues for a system of values that advocates social, political, and economic equity of women and men in society (Bryne, 2019; Foss, 2019). "One size" policies simply do not "fit all" nor will be effective if offered in isolation (Mason and Brown 2014). If the entrepreneurial ecosystem for women is to be improved from a policy perspective, future research must move beyond consistently recommending 'fixing women' through education and training. (Lene Foss, 2017).
Government Design	Discrimination Bias	Women businesses resources have been discriminated (Fischer et al., 1993). Government programs are they are not easily obtained by everyone who needs them, and they are not available as a "one-stop" service (Roos, 2019, Harber, Lo, & Davis, 2016). Business Incubators and Accelerators are built on assumptions that underpin current thinking about innovation and entrepreneurship and are highly gendered and culturally framed (Taylor, 2021). There is a systemic gap in the research on innovation activities performed by women (Kuschel, 2016). Many of the models and assumptions that underpin thinking about innovation and entrepreneurship are highly gendered and

		culturally framed (Beckon et al., 2016 PWC, 2018).
Government Implementation	Bureaucracy	Women faced tough challenges in terms of red tapes and bureaucracies (Athanne et al., 2011; Fisher, 1993).
	Access to support and subsidy allocation	Although there are a variety of entrepreneurship training programs, incubators, development programs, and financing options in Canada, women entrepreneurs currently face barriers to accessing support (Cukier & Chavoushi, 2020).
	Environment	High-technology incubators tend to be high-pressure, male-driven environments with cultures that are, at best unappealing and, at worst actively hostile to women (Bendell, Sullivan, & Marvel, 2019).
Social Networks	Family constraints	Women founders do not just experience barriers within the constructs of their industry and business launch, most studies identify funding, family and support as the main hurdles faced by women entrepreneurs (Zainuddin et al., 2017).
	Social pressure	Social pressures from society were identified as another challenge for women entrepreneurs (Halkias et al., 201; Goyal & Parkash 2011; Mauchi et al., 2014). Women encounter a lack of family support, juggling between work and family, and complexity of various roles (Goyal & Parkash, Zororo, Ahmad et al., Halkias et al., 2011).

		Social pressures from society were identified as another challenge for women entrepreneurs (Goal & Parkash, 2011; Mauchi et al., 2014).
	Lack of network	Lack of basic commercial networks and the underestimation of perspective towards women's capabilities in entrepreneurial activity by society. (Birley, 1988). Current family members influenced women in terms of providing information to start their businesses (Master & Mier,1988).
	Socio-cultural perceptions	Women entrepreneurs also face a lack of role models, gendered cultural expectations regarding work-life balance and what it means to be an entrepreneur, and at times a blatant sexism and harassment. (Jones & Clifton, 2015) Other challenges faced by women entrepreneurs include economically not stable/not self-dependent; high production cost of some business operations. Socio-cultural perceptions and biases may prevent women from obtaining senior roles in (digital) companies to the same extent as men (Farrell & Greig, 2017; Confirmation Bias, 2017; Seetharaman, 2017; WEF, 2017; Ferrell & Greig, 2017). Women entrepreneurs are challenged with limited social connections (Ozkazanc, 2018). Because due to childcaring obligations, women are generally perceived as less legitimate or less competent entrepreneurs (Thebaud, 2015;

		Kacperzyk and Younkin, 2019; J. Canning, 2012; Greene, 2003). Even among gender-egalitarian couples with dual careers, there are normative expectations that familial obligations and household chores are women's responsibility (Cha & Weeden, 2014; Hochchild & Machung, 2012). Industry, family and goal orientation greatly impact women's involvement in entrepreneurship (Gundry et. al, 2001).
Access to training and expertise	Access to education	Differences in the aspect of education, work experience, skills and approach compared to their male counterparts (Brush, 2009). Knowledge is a supporting factor in expanding their business ambitions (Gundry & Welsh, 2001) Women are confronted with lack of knowledge and access to knowledge, lack of business acumen (Halkias et al., 2011; Kinyanjui, 2006; Goyal & Parkash, 2011). Women are confronted with lack of knowledge and access to knowledge, lack of business acumen. (Halkias et al., 2011) Kinyanjui, Goyal and Parkash, 2011, Mwobobia Chinomona and Maziri, 2011, Goyal and Parkash, Kinyanjui, Mwobobia, 2012). Gender segregation across occupations and jobs can limit women's access to knowledge, information, and resources conducive to identifying high-value opportunities on which

		the founding of a high-growth venture depends (Anna et al., 2000, Brush et al., 2006)
Gender bias	Gender-discrimination	Women are faced with gender discrimination and gender stereotyping (Commonwealth Secretariat; Dionco-Adetayo et al. 2011). Women have been identified as conservative when making a decision compared to men more risk takers. (Masters and Meier, 1988). Negative gender stereotypes undermine female representation in a technical and scientific field (Brush et al, 2006; Ding et al., 2013; Coleman and Robb, 2009).
	Gender assumptions	Specific personality traits that tend to be associated with men (such as stability, extroversion and willingness to take risks) are requirements for entrepreneurship these are likely the result of gender biased structures that undervalue the input, skills and traits that women technology entrepreneurs possess (Steibing et al. 2019; Bode et al, 2019). Women businesses are mostly small and have been identified as insignificant to the society (Baker et al., 1997). Women in the digital economy are four times more likely than men to experience gender bias as an obstacle during startup (Cukier et. al, 2022). Hurdles to acessaccess, affordability, lack of education as well as inherent biases and socio-cultural norms curtail women and girls' ability to benefit from the opportunities offered by the digital transformation (OECD, 2018).

Access to Capital		Women faced with limited access to financial resource (Dionco-Adetayo et al., 2005; Haber S. L., 2016). Gender differences remain in entrepreneurs' access to capital (Alsos et al., 2006). Stereotypical ascriptions imply that women entrepreneurs are perceived as having different goals resources and behaviours than men, which investors may interpret as riskier investments (Greene et al., 2011). Most studies identify funding and family support as the main hurdles faced by women entrepreneurs (Zainuddin et al, 2017). Women-owned startups receive 23% less funding and are 30% less likely to have a positive exit compared to male-owned businesses (OECD, 2018). Male dominance among investors and venture capitalists and traditions related to investment in male dominated industries contribute to the gender skewness (Green et al, 2001). A vast majority of studies have focused on gender disparities in early investment suggesting that women are must less likely to obtain external capital from investors (Canning et al., 2012; Greene et al,. 2003, Gatewood et al., 2003; Brush et al., 2003; Coleman and Robb, 2009; Sorensen and Sharkey, 2014).

Source: Developed version based on the works by Zainuddin et al., 2017 and findings from my literature review.

The most recent literature suggests like-minded barriers to success as the research collected and published in the last 40 years. The concurrent and existing individual factors highlighted in no sequential order are: financial resources, access to education, work experience, social environmental issues, inadequate skill training and expertise, a limited business network, access to information and approach to business compared to males that continue to impact the success of women entrepreneurs and women founders leading technology startups (Zainuddin, et al., 2017). These studies emphasize the gender differences that women entrepreneurs and founders face compared to their male counterparts. The differences suggested in the literature indicate that the challenges are more significant in the 21st century as they are facing new issues associated with participating in technology and innovation (Zainuddin et al., 2017). As suggested by Gupta (2017) improving the probability of success for women entrepreneurs requires diligent and continuous efforts on the part of the government.

In both policy and academic circles, there is substantial interest in the fact that women receive less venture capital (VC) than men (Brush et al., 2009). Studies using various methods have found that only a small percentage --between 1 and 6 percent-- of VC-backed companies have female founders (Greene et al., 2001; Harrison and Mason, 2007), compared with the 40 percent of all American businesses founded by women. This gender disparity also occurs within the funding network itself, as only 14 percent of all venture capitalists are women (Stuart and Sorenson, 2007; Cain-Miller, 2010).

The Women's Entrepreneurship Knowledge Hub, in 2020, published a report detailing the continued and perceived lack of legitimacy in the technology entrepreneurship space for female

founders and the male-centric culture dominating the field (De Laat, 2020). There were several recommendations, including the idea that all initiatives should be introduced at multiple levels, so that the current problems of culture, access to resources, and education are addressed and changed to new policy development. The research executed through the Women Entrepreneurship Knowledge Hub that informs WES does not just point to gender-bias barriers in Canada but a global call for change to address gender-based barriers to access to financing for women (De Laat, 2020).

Each of the barriers stated above has also been considered a success indicator in literature for male founders, such as, access to financial capital has been a core issue for researchers seeking to reveal gendered aspects of entrepreneurial activity (Marlowe & Swail, 2013). The information collected during this research grouped barriers and the success indicators in the 21st century into multiple domains. For this study specifically, I am focusing on three main factors that can encase barriers to success for women entrepreneurs and founders: political priorities; government policy; and social networks. I have chosen to focus on these three factors due to my direct relationship with the Canadian government. These three topics, at a high level have been studied at length over the last two decades, as indicated in *Table 1*, however, the relationship embedded between the three main contributors is not traditionally discussed together in research.

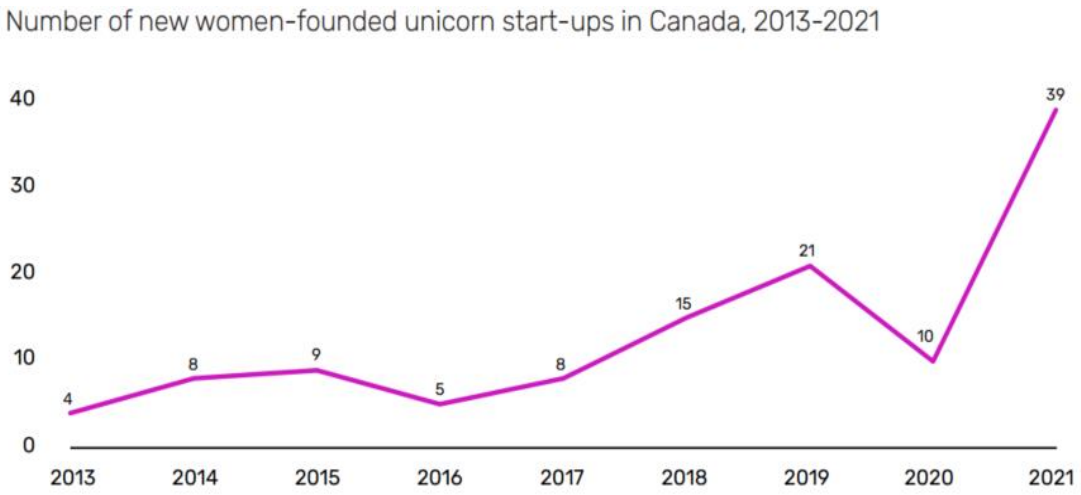
2.6 Political Priorities

The idea of participating in the innovation ecosystem is deemed as an available opportunity for all. “Entrepreneurship is thus naturalized, normalized and neutralized; it is depicted as being available for all; everyone is included as long as they choose the right kind of entrepreneurial

mentality and mindset (Berglund & Jones, 2014). In Canada, a report by the National Center for Women in Information Technology shares that despite making up fifty seven percent of the workforce overall, women only hold twenty five percent of jobs in IT and eighteen percent of CIO positions in the top 1,000 companies in the US (Ashcraft, McLain, & Eger, 2016).

As shown in Table 2, the analysis of private startups reported with unicorn status by having crossed the $1 billion valuation mark for the first time is beginning to show a small representation of female-founded or co-founded companies with both gender representation. However, this represents twelve percentof the 327 new unicorns minted globally in the first seven months of 2021, which continued to be on par with the previous years' report (Glasner, 2021). If female founders with high growth potential are not advancing, there is evidence to show that investors and industry technology advisors or those working in influential positions continue to penalize female founders for their lack of industry fit (De Latt, 2020). In Canada, women founders and women working in the digital economy report that they feel they must work harder than their male coworkers to prove their worth. In addition, women in the digital economy are four times more likely than men to experience gender bias as an obstacle during the diverse stages of startup growth such as, a venture capital raise or application non-dilutive funding (Sullivan-Hasson, 2021). A report released by Diversity Venture Group outlined that the number of female general partners in formal venture capital funds in Canada continues to be low, sitting at a staggering fourteen percent(Taylor, 2021). If we consider this fact from the opposite lens it is quite telling. This statistic shares that eighty-six percent of potential investment funds in Canada are carried by and controlled by male investors. Low female participation in Venture Capital firms has redirected critical financing and support for Canadian female founders in the past. In

addition, female founders only accessed 2.4% of the total capital investment made in venture-backed startups in the US during 2021 (Taylor, 2021).



Source: Adapted from Grant, K., & Rahman, S. (2021). Assessing the participation and success of women entrepreneurs in unicorn startups. *ECIE 202116th European Conference on Innovation and Entrepreneurship 1,* 397-406; and Glaster, J. (2021). *Here are the new 2021 unicorn startups founded by women*. Crunchbase News. https://news.crunchbase.com/news/here-are-the-new-2021-unicorn-startups-founded-by-women/

Source: Number of new women-founded unicorn start-ups in Canada, 2013-2021 (Grant K. R., 2021)

There is growing attention on women and diverse entrepreneurs; however, research gaps remain. The government of Canada is committed to doubling the number of women owned business by 2025 and as such, have indicated a need to address the unique barriers facing women in technology through a further investigation through research funding. The Canadian federal government has stated that the growing presence of female founders participating in the startup ecosystem could mean an additional $150 billion in GDP by 2026. To advance the innovation economy, the Women's Entrepreneurship Strategy (WES) was launched by the federal government under Budget 2018. To capitalize fully on this strategic investment, the government

of Canada will have to challenge stereotypes strongly tied to positive or negative traits identified for female founders, which have to include challenging those individuals working in government as policy makers and front-line workers. Stereotypes are widely held views and assumptions that shape individual perceptions of what is possible, informing the view of what individuals, based on their membership to a particular group, can or ought to achieve (Cukier, Chavoushi, & Borova, 2022). Although governmental programs are considered effective and professional, they are not easily obtained by everyone who needs them and are not available as a "one-stop" service for women entrepreneurs and founders. To make continued progress on the commitments through the WES strategy key decision makers in government must take a broad and long-term view towards re-stabilizing and incentivizing women to see themselves as high growth founders.

There is evidence to show that investors continue to penalize female founders for their lack of industry fit (Dana Kanze, 2020). In Canada, women founders and women working in the digital economy report that they feel they must work harder than their male coworkers to prove their worth (Vu, 2021). In addition, women in the digital economy are four times more likely than men to experience gender bias as an obstacle during the diverse stages of startup growth such as, a venture capital raise or application non-dilutive funding (Borgonovi et al, 2018). A report released by National Angel Capital Organization (Women in Venture Report, 2018) outlined that the number of female general partners in formal venture capital funds in Canada continues to be low, sitting at a staggering 14 percent. If we view this from a different lens, 86 percent of potential investment funds in Canada are carried by and controlled by male investors. Having low female participation in Venture Capital firms has in the past redirected critical financing and support for Canadian female founders. In addition, female founders only accessed 2.4 percent of

the total capital investment made in venture-backed startups in the US in 2021 (Chapman, 2022). The Growing Your Own Way study shares that women are also underrepresented in the partner representation area: in Canada, women make up 7 percent of partners at top venture firms and less than 12 percent of partners at both accelerators and corporate venture firms. Unsurprisingly, women entrepreneurs and founders are less likely to receive funding from Venture Capital and other investors (De Laat et al., 2020). If women are not equally represented on all sides of business transactions, history has shown that there is more room for discrimination and bias.

The literature suggests a correlation between the role of government investment in Business Incubators and Accelerators (BIA) programming and the advancement of the innovation ecosystem and founders (Fernandes , Moacir, Sbragia, & Borini, 2016). There has been less research published indicating the correlation between government investment in female-focused programming and the heightened advancement of women entrepreneurs and founders through this identity-based programming. Furthermore, we should consider how relationship assets can be related to creating networks for female founders to share technologies among incubated firms and companies. Second, the connection that a female founder makes with the Industry Technology Advisor working on the frontline at a business incubator and accelerator is extremely important. Those individuals working in these power positions can both advocate for and provide one on one coaching and act as an additional support position with female founders. Many of the models that business incubators and accelerators are built on and assumptions that underpin current thinking about innovation and entrepreneurship are highly gendered and culturally framed (Taylor, 2021).

In both developing and developed countries, research suggests that political priorities have shifted intentionally to the innovation economy and inclusion, shifting practices to allow for more diverse and gender-focused government systems (Zainnudin et al., 2017). However, programming continues to be written with a bias toward men using a one-gendered lens for definitions, indicators of success and metric collection. Unconscious bias is defined by Lopes (2006), as people are socialized to perceive physical and social characteristics for example: skin tone, hair texture, cultural habits, dress, language, accents, as well as religions, political beliefs, and surnames). When these perceptions become consciously or unconsciously linked to a specific group of people, they become racial signifiers. The perceptions are also defined as either desirable or undesirable (Lopes, 2006). As a result of these signifiers and socially created perceptions, people may think, say, or do things that marginalize racialized people. The role of government in addressing gender disparity can be analyzed through the relationship between, business incubators and accelerators supported through federal funds and specifically how the programming is focused on the successful behaviors of female founders.

In 2012, Masuo established that business success could be defined in terms of economic or financial measures that include return on assets, sales, profits, employees and survival rates; and non-pecuniary measures, such as customer satisfaction, personal development and personal achievement. There are two different layers of the relationship between the founders and the government. The first is in the form of business incubators and accelerators and their programming. The second major touch point is with government employees, or industry technology advisors working directly with founders as frontline innovation ecosystem specialists. When working with government-supported programs, specific individuals in support

roles are responsible for working with female founders. The role in the industry as a Technology Advisor is defined by the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP), as an industry professional who leverages their technical, business and entrepreneurial experience to help Canadian companies grow and thrive. In the current landscape business incubators and accelerators (BIA's) including their board representation in Canada, are managed predominately by male executives, business advisors, or Industry Technology Advisors (ITA). The correlation between achieving new growth milestones for female founders and the role of the industry advisor has not been researched at length. We understand that gender is always present when people act and interact (Zimmermand & West, 1987), consequently gender is present in Industry Technology Advisor - women founder relationships. The concern with understanding the relationship between entrepreneurship and gender ultimately moves toward taking gender as a lens through which to examine entrepreneurship itself. This allows research to move from studying differences between individuals to studying how gender is embedded in processes, meanings and experiences of entrepreneurship (Ahl & Marlow, 2012; Mirchandani, 1991).

Hanson (2009) argues that a further focus on empowering women entrepreneurs within a program will enable women to challenge gender structures. At the same time, however at the core, many of these programs have been identified to further comply with the masculine norm of economy, as the measures of success have been pre-determined indicators formed through the masculine constructs of success. The programs are, unfortunately limited to discussions on structural issues surrounding gender, entrepreneurship, the innovation ecosystem, and pre-defined success measures at various stages of growth. The program that finances the female

entrepreneurship network reinforces gender structures by deciding how entrepreneurship is supposed to be measured and how the women who join the group enact this measure (Roos, 2018). In addition, research over the last two decades does not focus on the training or expertise of those in the role of project managing the program. Moreso, the focus has been on the type of network and mentorship a founder has access to outside of the program.

2.7 Policy

Policy learning and coordination draw attention to policy coherence and consistency across fields and levels, as well as the necessity of reflexivity in and associated adjustments of policy processes (Schot & Steinmueller, 2016). In April 2022, there was a new $25 million call for proposals funded through the Canadian federal Budget 2021 and Women Entrepreneurship Strategy, with a priority to advance gender equality and access to venture capital funding for women entrepreneurs and founders. It is well-documented that failure to learn and adapt to the support structure of an innovation system may render a situation of institutional and political lock-in (Grabher, 1993; Hassink, 2010). This inability to adapt has hampered the transformation and emergence of new growth paths (Lundvall, 2010).

For Schot and Steinmueller (2016), this work needs a strong call to action, and an urgent shift to innovation policy 3.0 is required in order to future-proof our societies and economies in a time of rising inequality, climate change, and growing unemployment. At the meso level, studies have indicated that government should consider culture and values, whereby at the micro level, it is necessary to understand the knowledge, belief, and behaviors of female founders so that government can change policies written with a preconceived bias. In opposition, bias sits with

Industry Technology Advisors, and with government policymakers. We have observed over time that unconscious bias can be a dominant control in every human being.

Women entrepreneurs and founders are still facing prominent integrated challenges that hinder their advancement in business, such as religion, culture, work-family related pressures, gender bias industries, unconscious biases, and stereotypes. For instance, gender can be mutually intertwined with how founders choose to include human capital, social capital, find industry context, technology, and venture ideas. Accordingly, gender should not be isolated as a separate variable but perceived as embedded in relations in which entrepreneurs operate (Marlowe & Swail, 2013). Women have historically had to raise capital in non-traditional ways. One aspect of opening up new avenues to increase the representation of female entrepreneurs and founders across all sectors will be to change the constraints, including those that live inside government policy, political priorities, social network and at the micro level, day-to-day business exchanges.

2.8 Social Network

Women founders are still facing prominent integrated challenges that hinder their advancement in business, such as religion, culture, work-family-related pressures, gender bias industries, unconscious biases, and stereotypes. For instance, gender can be mutually intertwined with how founders choose to include human capital, social capital, find industry context, technology, and venture ideas. Accordingly, gender should not be isolated as a separate variable but instead perceived as embedded in relations in which entrepreneurs operate (Marlowe & Swail, 2013). Women have historically had to raise capital in a non-traditional. Moving away from the messaging that women are risk averse and need to raise capital in alternative ways will allow for

a new mindset for upcoming women entrepreneurs and founders. Successful high growth entrepreneur stories are lacking for women entrepreneurs are different and comprised of different categories (Chauke, 2019).

There are several individual factors related to women entrepreneurs and a founder's social network that impedes success. Firstly, women founders are forced to work in the social constructs and responsibilities of both business deliverables and the pressures of societal norms. The social constructs that still force women to take on a traditional household role either through culture or individual pressure, continues to adversely impact the success of women founders. Women entrepreneurs thus operate under a 'damned if you do, damned if you don't' scenario (Marlow & Patton, 2005). The women are 'damned' if they act as proper (male) entrepreneurs, since complying with the masculine norm further upholds subordination of other forms of entrepreneurship. The women are 'damned if they don't' strive to act as proper entrepreneurs, since they then lack legitimacy and are not considered proper entrepreneurs.

As shared by Wang & Shrimohammadi (2016), Women entrepreneurs following Confucian principles tend to be characterized by distinct cultural values, such as having a sense of shame and having respect for tradition. This means the feminine qualities associated to a women's role play a strong part in the type of encouragement received from a female entrepreneur and founders peer to peer group. The previous study undertaken has shown that female and male business owners respond differently to family role pressure and community pressure. However, there is limited study on the integral role of a female founder's life partner or spouse, and the correlation to the advancement of female entrepreneurs and founders achieving success in a high-growth business. The decision-making process for female founders is influenced by the

different roles they play in business and at home with one impacting the other. In addition, women entrepreneurs and founders are more likely to value and embed social and community motives into their businesses (Strawser, 2021). This should be recognized as a positive success metric and asset when evaluating the strength of a business. Lastly, reaching the United Nations Sustainable Development Goals and sustaining this achievement is not possible without the advancement of women entrepreneurs and founders. Their participation in the social economy is vital in new value creation through entrepreneurship and innovation (Estrada, 2022).

2.9 Literature Review Conclusion

There are parallel factors experienced historically by women entrepreneurs and founders, that continue to act as deterrents to success in the twenty-first century.

To address the objective of this study, I first conducted a literature review to help inform the case analysis and primary research. The literature review suggested consistent system-wide barriers and highlighted a diverse number of root causes associated to perpetual barriers to success experienced by women in developed and developing countries. The three main factors used to define the unit of analysis for this study are political priorities, government policy (design and implementation), and social networks.

Chapter 3. Context

3.1 Introduction Context

The literature indicates that in the 80s and 90s, innovation programming did suggest homogeneous needs between genders. However, moving into the 21st century, Women's entrepreneurship has grown to become an important research domain, although still only ten percent of entrepreneurship research looks at women entrepreneurs (Jennings, 2013). Historically, policy has been written through a one-gendered lens. If we continue to develop any of the three main factors defined within the unit of analysis, without gender differences in mind, women entrepreneurs and founders will be left behind (Taylor, 2021).

In 1999, Ryerson University launched the Women's Entrepreneurship Knowledge Hub (WEKH) to advance research on the needs of diverse women entrepreneurs across all regions and sectors (Women Entrepreneurship Knowledge Hub, 2018). The work and research administered through WEKH are in support of and driven in partnership with the government of Canada. WEKH operates through ten regional hubs and 250 partners nationally. The regional hubs focus on enhancing programming and support services for women entrepreneurs and founders through executing local and national research and data collection to inform the government of Canada's Women Entrepreneurship Strategy. This work is committed to supporting the advancement of women founders by removing barriers to new business launch and scale.

De Laat's (2020) research indicates that the barriers to access for female founders in the entrepreneurship and innovation ecosystem could be linked to cultural stereotypes, which include:

lack of encouragement, lack of female-friendly pedagogy, absence of role models, lack of mentorship and sponsorship, “bro-culture” in business incubators and accelerators. While women entrepreneurs currently make up sixteen percent of Canada’s entrepreneurship ecosystem. De Laat (2020) suggested that women founders in Canada continue to face a number of barriers to growth. The first and foremost mentioned is, women face strong difficulties receiving financing for their ventures and previous financing requirements may act as a barrier. In addition, research indicates that while women and men assess the importance of growing the scale or scope of their business, similarly to each other, the strategies used to drive business growth differ slightly by gender. This includes the way women value and approach pre-defined growth and success mindset. The exclusion of women-founded businesses is having a significant impact on the Canadian economy. The State of Women’s Entrepreneurship Report suggests an additional ten percent increase in women owned enterprises could add $198 billion to the economy (Cukier W. M., 2022).

For this reason, the Canadian government is continuing to invest in the Women Entrepreneurship Strategy (WES) Fund, through increased top-up funding. In Canada, there are limitations in research on the intersectionality between minority groups and gender barriers. Furthermore, women entrepreneurs are engaging in innovation through research to commercialization programs and now more than ever are participating in the innovation economy. However, research indicates that in the United States, just over two percent of venture capital financing is allotted to women founders, even though women-founded companies make up 40 percent of private companies (Bittner, 2021).

The Canadian government has prioritized building gender focused innovation clusters on enabling equal access by gender to resources. The innovation infrastructure in Canada, provides a vehicle of regional specialization by the province to increase the competitive advantage for women entrepreneurs and founders. The Canadian innovation clusters have diversity and inclusion in mind and prioritize developing gender and minority focused programs, formalized training, and wrap-around services through key partnerships. Although governmental programs are considered effective and professional, they are not easily obtained by everyone who needs them, and they are not available as a "one-stop" service (Ross, 2019; Haber et al., 2016). As the Canadian government increases the investment into the Women Entrepreneurships Strategy, there is a need to explore further how the feminist perspective is leading evaluation and key success metrics for new women-focused programs.

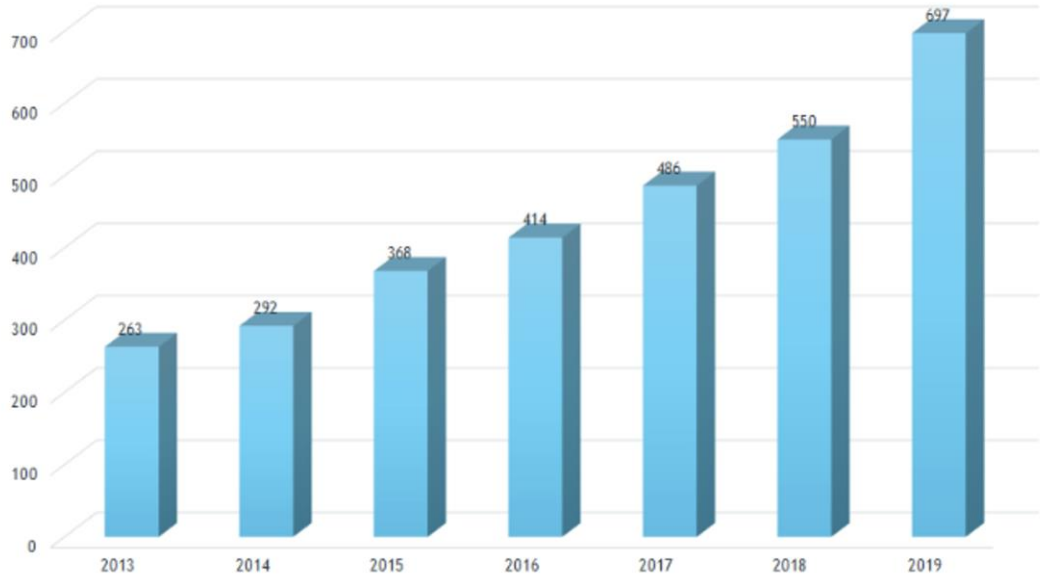
The federal government is looking to address this disparity. In the spring of 2021, the Venture Capital Catalyst Initiative was launched under the Women Entrepreneurship Strategy. This is a specific initiative with a $50 million fund that directly targets Venture Capital Firms and not-for-profits supporting female founders in Canada. The fund, over three years, will support the development of educational programming for female founders to help increase access to venture capital funding for under-represented groups, including women. Marlow and Swail (2013) recognized that access to financial capital had been a core issue for researchers seeking to reveal gendered aspects of entrepreneurial activity. Specifically, this Women Entrepreneurship Strategy funding will deliver in service areas that include:

- Assisting women entrepreneurs to better understand available options for financing and enable them to pursue and access such options;
- Support efforts to advance and grow the representation of women in roles such as investors/fund managers in various venture capital industry contexts;
- Provide education and training to support equitable access to funding;
- Engage investors to better understand, adapt to, and work with women entrepreneurs or their enterprises;
- Foster networking or mentoring models to facilitate access to capital for women entrepreneurs and their businesses, and;
- Demonstrate support and contributions in other areas to strengthen the network of women and diverse entrepreneurship organizations in Canada, aligned with Women Entrepreneurship Strategy and fund objectives.

In Atlantic Canada, female-led enterprises raised a mere $34.8million – eight percent of the total (excluding stock market transactions). Notably, this is not an encouraging number, given that the female founders in Atlantic Canada have not been able to raise about the eight percent reported combined raise for the last six years. Women founders have been unable to break through financing barriers to increase funding levels (Moreira et al., 2021).

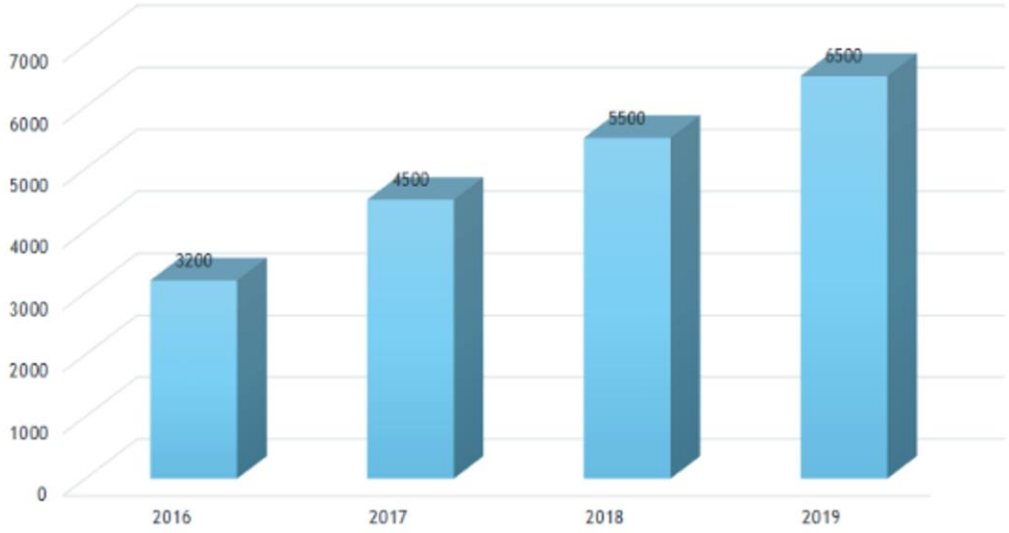
Figure 1 (a) and (b), show the steady increase of active startups in the Atlantic Innovation Ecosystem between 2013-2019, including job growth.

Figure 1 (a). Number of Atlantic Canadian Startups



Source: (Entrevestor, 2020)

Fibure 1 (b) Startup jobs (2016-2019)



3.2 Conclusion

A significant investment has been contributed to building a more inclusive landscape for women entrepreneurs and founders in Canada (Cukier, 2021); however, less than seventeen percent of small to medium sized businesses are majority women owned in Canada. Several publications have had key recommendations for advancing and making the innovation and entrepreneurship ecosystem more inclusive in Canada (WEKH, 2018-2021). Without actioning key priorities that reflect women's needs, we will continue to see similar barriers and growth results for women entrepreneurs and founders (Moreira, 2021).

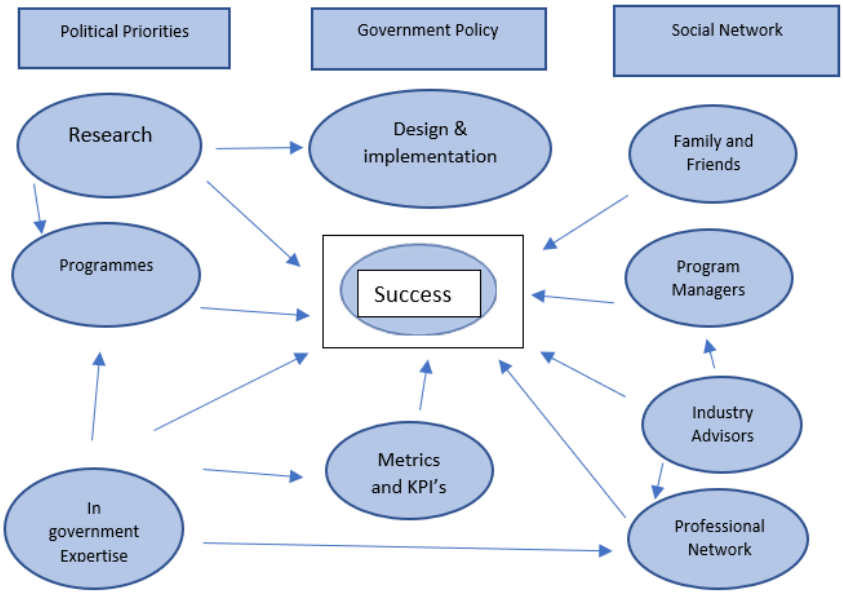
Chapter 4. Methodology

4.1 Introduction

The main objective of this study is to examine the continued barriers to success and new barriers not yet explored at length through literature, and that have been experienced by women entrepreneurs and founders.

To address this objective, I implemented the case study research method (Yin, 2003). As stated (Yin, 2003), “Case studies continue to be used extensively in social science research.” The unit of analysis for this study is success for women entrepreneurs and founders (see Fig 2). I sought to hear from and examine firsthand the experiences of Canadian women high-growth founders with the focus of better understanding key barriers within: political priorities, policy design and implementation, and social network conditions, whereby success is the unit of analysis. This would include the personal definition as it pertained to their business success, key performance measures and experience operating in the innovation ecosystem.

Figure 2. Unit of Analysis



The unit analysis represents the link between each of the suggested barriers to success and their immense relationship between each other. Success indicators for female founders are highly dependent on the relationship between political priorities, government policy (design and implementation), and social networks.

This primary research explored the constraints experienced at different stages of growth by women founders operating in Canada. The case study method helps you to make direct observations and collect data in a natural setting, compared to relying on "derived" data (Bromley, 1686). Success, the unit of analysis was pre-determined through secondary research, with further validation through the qualitative analysis. According to Queiros et al. (2017), the striking feature of this methodology is that the questions to be investigated are defined from variables or hypotheses previously formulated, not just examine barriers, but included

opportunities and benefits awarded to women founders as they scale their companies (Quintao & Andrade, 2020).

The case study method applied to the quantitative analysis followed specific steps. The first step, Gathering and collecting qualitative data, used a complex strategy with prework that was executed over an eight-month period. The primary data sources of this study comprised interviews of thirteen key actors in executive-level positions operating within the innovation ecosystem in two different capacities: 1) funding (non-dilutive or dilutive), and 2) programming, advisory and support. The actors convened were heavily involved in the development and implementation of programming, gender-focused incubation, funding programs and policy development. Overall, the knowledge, expertise and diverse mandates of the informants would limit the bias from possible retrospective sense-making and impression management (Me, 2007). I wanted the executives' third-party opinions of their personal perceived success, constraints, and barriers to access, experienced by women founders in three different capacities: government priorities, policy development, design and implementation, and social network. The objective is to use several complementary sources of evidence to obtain multiple perspectives on a phenomenon (Quintao & Andrade, 2020).

The combined broad goal of the 13 actors was to create better and more inclusive opportunities for economic growth in the Atlantic Canadian region by helping women entrepreneurs and founders become more competitive, innovative and productive. I first convened the working group of 13 in October 2021. This initial meeting provided the needed context on the state of the ecosystem, and the progress made over the last five years in Atlantic-Canada to build a more

inclusive and collaborative startup culture in Atlantic Canada. In Atlantic Canada, there was a twenty three precent increase between 2021 and 2022 in startups, with 164 new startups launched in Atlantic Canada alone. As reported by the Government of Canada (2021), this translates to a growth of forty three percent. In 2020 Entrevestor identified 105 startups with female CEOs, an average of fourteen percent of total startups in Atlantic Canada.

The objective was for this group to determine key priorities for female founders, so that I could find commonalities between the secondary research findings and their expression of barriers for female founders. As we know, there is a systemic gap in the research on innovation activities performed by women (Kuschel, 2014). Most studies have focused on the innovation performed by men. Although women in entrepreneurship and innovation are a global priority, less than ten percent of entrepreneurship literature focuses on women in entrepreneurship (Meyer, 2018). This preliminary session helped to refine my unit of analysis and next steps.

I set a specific objective for the first meeting: To establish a common ground between the actors, a commitment to share information openly, and a cohesive acknowledgment of the importance of this work. At the beginning of the first session, each actor had three minutes to introduce the organization they represent and what type of constraints are impacting the female entrepreneurs they are working with. In addition, I asked that each actor share information on their specific touchpoint with women entrepreneurs and founders. Such as, offering funding, programming, or direct advisory support within the ecosystem. The actors had been given pre-work before the first session and had reviewed several questions to help them prepare for and to build strong group participation. The prework included a request for information on the organization, history of

programming, the current gap addressed by their organization in relation to barriers of access for women entrepreneurs and founders, lessons learned to date, key partnerships, and future areas of focus.

This first session gave a collective understanding of the population of high-growth women entrepreneurs and founders, the organizations were servicing through, funding, advisory services, and programming. Furthermore, this preliminary session gave me a common understanding of how the actors perceived strengths and gaps in the success experienced by women entrepreneurs and founders currently operating in the innovation economy within Canada. Concurrently, the session brought to light the actors' individual perceptions of the ecosystem through open-ended strategic questioning on Strengths, barriers, and opportunities.

Table 2. Key findings Session 1. Focus group with experts

Key Takeaways	Specific feedback
One definition of innovation	-There is a need for a stronger understanding in the region of what it means for a female founder to be operating as venture backable, high growth or a small business entrepreneur.
Collaboration and sharing	-To facilitate ecosystem, change and further advancement for women founders there needs to be various layers of change, with program managers at the table. -The information garnered from this type of session should be anonymized and put back into the ecosystem for broader reflection. There needs to be more actors at the table for this type of discussion.

Setting metrics as a community of stakeholders	-Atlantic Canada and the government of Canada should have baseline of metrics against the advancement of women entrepreneurs and founders. This baseline could be gathered through the assessment of other leading ecosystems globally. How can the Canadian innovation ecosystem take a stronger look at those specific metrics business incubator and accelerator metrics currently used to inform research? -For instance, it is important to consider how much longer it takes a female founder to gain traction through federal government programs versus their male counterparts.
Communications strategy	-There is a need for more and better modelling for women entrepreneurs and founders. -There are not enough success stories highlighted through the media that celebrates women entrepreneurs and founders in Canada.
Female founder research (Primary and Secondary)	-How is the Canadian innovation ecosystem modeling with a bias towards women founders? -How is the Canadian innovation ecosystem promoting female founders? -What is the percent of high growth female founders accessing funding proportionate to male founders? -We need the private and public sector to keep inclusion top of mind. -How can we bring Black, Indigenous, and other minority founders to the table to learn from their experiences?
System Navigation	-The System should support growth in confidence for female founders.

	-There needs to be a priority on resiliency training for female founders. -How do we ensure that female founders being supported and are they comfortable in asking for help from advisors?

The second part of the session was formatted as a round table discussion which focused on digging into the challenges shared by female founders and indications of success deterrents. Each actor had a consensus on the barriers brainstormed earlier in the day. More than once, I heard a strong voice raise that "Women founders are still not viewed equally to men in hard pace and are not taken seriously" (Actor C). All thirteen actors shared the perspective that the current policy that informs the ecosystem definition of success hinders women founders by viewing determinants of success as the same for women founders versus males.

During my literature review, success for women entrepreneurs and founders was described by (Prajawati et al., 2020) as having two criteria. The first is when they can meet their needs (individual satisfaction), and the second is social performance to be achieved by entrepreneurs. The motivation of women entrepreneurs to establish their venture and reach success was not only valued by financial return, but also personal satisfaction. This was also an indicator of entrepreneurial success for female founders and entrepreneurs as defined by the actors during the first session. During the discussion, the actors questioned if the ecosystem is taking the right approach when considering individual assessment, metric tracking, and results for female founders. Entrepreneurial success is traditionally associated with business performance, which is mostly determined by the growth and survival of the company (Fairlie, 2014).

In addition, the question of how and when social purpose results should be considered came up several times. Social purpose, as defined by the United Way of Canada, reveals there are three main elements of a social purpose business: a reason for being, a social ambition, and a profit motive. A business with a social purpose is a company whose enduring reason for being is to create a better world. It is an engine for good, creating societal benefits by conducting business (United Way Social Purpose Institute, 2021).

Table 3. Common themes discussed: Barriers to success

Embedded bias	Women founders are questioned differently in business incubator and accelerator competitions, during institutional interviews, in advisory settings, and during financing. There is different and biased line of questioning during pitch competitions and Q&A periods received by women entrepreneurs and founders. The ecosystem program applications continue to be directed towards the male mindset and definition of success.
Mindset	If you can't see it, you can't be it. Women are still not seen to be leaders in the innovation ecosystem.
Awareness	The ecosystem advisors: institutional, government, business incubators and accelerators, investors, and mentors, need to have a better early-stage pipeline indication for women entrepreneurs and founders.

	Women entrepreneurs and founders should not be viewed as a charity opportunity and should have equal access to the unbiased experienced advisory.
Social pressures	Women entrepreneurs and founders are still expected to work in specific industries. Women founders cannot make mistakes in the same way as men, there is less opportunity to fail, fail fast, pivot and continuously iterate. Women are under the microscope of the innovation community. There are women mentor role fatigue for women founders who have been forced to become a mentor or 'spokesperson' while building their own companies. The ecosystem is difficult to navigate and programming for women should be clear and differentiated.
Corporate world takeaways	Creating a safe environment for women founders means, encouraging and celebrating whistleblowing. Executives should feel the need to call out bad-behavior peers. Closed door behaviors and opinions about women founders must be tacked.
Touchpoints with women founders	• Cohort Intakes • A response to a warm introduction to a women founder • Site visit • Progress reports • One on one engagement
Education	Any actor that is at a touch point in the journey map of a women founder from ideation to high growth should

	be educated on diversity and inclusion, unconscious bias training, WES programming, and entrepreneurship versus innovation.
Dashboard for women founders	Canada should be operating under one collective set of goals to advance women founders. There should be within the WES program and budget allocation a clear set of short, medium, and long-term visions for the ecosystem, with a spotlight on diversity, inclusion and the advancement of minority groups. There should be strong visibility of the overall Canada-wide dashboard and pathway to the success achieved by women founders.

The first session concluded with each actor validating the need for further primary research and encouraging direct engagement with Atlantic-Canadian female tech founders currently operating in the innovation ecosystem.

4.2 Data collection

After the first session, I sought feedback from my advisor on how to best approach collecting information from high growth women entrepreneurs and founders operating within the Atlantic Canadian innovation ecosystem. I reviewed best practices on the case analysis methodology. I then considered the different approaches of interviewers. Given my engagement with the Federal Government, I decided that the best way to approach this type of primary engagement would be through hiring a third-party interviewer to execute three different round tables of interviews with 8-10 women founders. I wanted to keep the size at ten or less for each interview in order to

ensure that each respondent would be heard, and so that the group size wouldn't be overwhelming to the third-party interviewer. This is a similar approach to the one actioned when the Government of Canada was collecting innovation community feedback to influence the policy, and launch of the Women's Entrepreneurship Strategy.

To select the right consultant to execute the third-party interviews, I established specific evaluation criteria and vetted these criteria with the working group of thirteen actors. The key demand of the case study method is the investigator's skill and expertise in pursuing an entire (and sometimes subtle) line of inquiry at the same time as (and not after) data are being collected (Yin, 2003). It was important to keep the same interviewer for each of the three round table interviews to ensure consistency of communication for each respondent.

Selection criteria for the third-party interviewer included:

a. By definition a high-growth Canadian female entrepreneur operating in Atlantic Canada;
b. A leader and champion in diversity and inclusion practices;
c. Have a relationship with, and an initial understanding of the innovation ecosystem in Canada, and more specifically Atlantic Canada.
d. Must be effective and efficient in client-facing support practices and communication.

I made a list of six different potential candidates to consider hiring as the third-party interviewer. Second, I wanted their primary residence to be in Atlantic Canada, so that the interviewer could use location and geography as an easy connection point to help build comfort with the

respondents during the introduction process. The location of the third-party interviewer was a decision-making factor because the pipeline of high growth women entrepreneurs and founders focused on founders operating in Atlantic Canada. I did not want the diverse geographic association to a specific geographic location in Canada to be a constraint during the interviews.

Once the third-party interviewer was hired, the next step was to construct a list of interview questions that incorporated both open-ended and close-ended questions to act as a guide for the interviewer. The pre-determined interview guide had ten open-ended questions. During the question writing process I went through five different iterations of design, with feedback requested from each of the thirteen actors. The questions were constructed based on feedback provided by the third-party working group and used information from the literature review, existing models of interviews and previous results from other research investigations into advancing women entrepreneurs and founders.

The third-party interviewer was instructed to give feedback on relevancy and effectiveness associated with political priorities, government policy (design and implementation), and social networks associated with *success*. I gave the interviewer instruction to use the pre-determined questions as an initial place to start the interviews with the female founders. My instructions included a request that the interviewer should not just take the first response provided by the female entrepreneur or founder, but instead, I requested that for each response given, an additional question be posed. This way the interviewee would have the opportunity to push deeper into the response. The third-party interviewer and I met three times for thirty minutes before the interview dates, and an additional three times. I assisted in preparation for the

interviews, and we practiced the delivery of the questions. I requested specifically that empathy tenets of the Design Thinking (DT) methodology be applied during the interviews to put the women founders at the heart of the process and encouraged an iterative approach to how the interview questions were followed. According to IDEO's understanding, DT is "a human-centered innovation process that emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping and concurrent business analysis." (Brown, 2009). I chose to apply this method to aid in establishing a more human-centered interview process and build an environment for the respondents where they could feel comfortable and open to dig further into questions and responses.

The primary research used purposive sampling to select the participants. As a starting point, I initially built a pipeline of 138 women founders operating in Atlantic Canada. I took this active pipeline to the 13 actors participating in the working group, and requested they each nominate at least three women entrepreneurs and founders that would identify as high-growth founders to participate in the interviews.

The selection criteria for respondents had several elements established through continued consultation with the thirteen actors I had convened initially, and included research findings indicated in the literature review. For a founder to be shortlisted as a respondent, the founder had to be actively engaged in the innovation ecosystem, and available support within the last 12 months. Once this shortlist was complete, I mapped out which of the identified women entrepreneurs and founders had worked or been connected to more than one partner organization working in the Atlantic innovation ecosystem in Canada. A partner organization is considered a

business incubator and accelerator, program, funder, or individual providing advocacy or support for women entrepreneurs and founders. Once I had completed this step, I studied the pipeline specifically for geographic representation to ensure that there was both rural and cross-regional representation. Lastly, I wanted to make certain that the interview list had founders operating in diverse sectors. The variables were as follows: industry, gender, experience, age of startup, technology-enabled and/or high growth, and geographic representation. In addition, the respondents had to have worked with at least one advisor from in the innovation ecosystem and participated in one or more programs from the organizations that the thirteen actors represented.

The goal was to have thirty female founders committed to participating in one of three different sessions, scheduled for one month apart between January and May 2022. There were fifty-eight women entrepreneurs and founders who received invitation letters to participate in the interviews and that met the selection criteria. Of the fifty-eight women entrepreneurs and founders, thirty-eight women founders responded indicating interest in participating. Given that during the time of this research, in Nova Scotia Canada we were still operating under strict COVID-19 guidelines, the decision was made to hold the interviews virtually. There was a pre-session letter that was sent out to respondents that provided each respondent with a brief example of sample questions in advance of the interview date. Table 4 outlines the founder pipeline selected for invitation.

The choice of descriptive sampling was strategically applied when coding the interview transcripts. Descriptive sampling is based on a deterministic and purposive selection of the

sample values-in order to conform as closely as possible to the sampled distribution- and the random premutation of these values (Saliby, 1990).

Table 4. Founder pipeline selected for invitation

Advancing Women in Technology Pipeline							
Founder	**Gender**	**Stage of Lifecycle**	**Ecosystem Engagement**	**Primary Sector**	**Secondary Sector**	**Region**	**High Growth**
A	Female	Scale	Yes	ICT		Central	Yes
B	Female	Scale	Yes	Services	Multi-Sector	Central	Yes
C	Female	Commercialization	Yes			Central	Yes
D	Female	Commercializaton	Yes	Agriculture, Fisheries		Central	Yes
E	Female	Commercialization	Yes	Food Insecurtiy	ICT	Nothern	Yes
F	Female	Scale	Yes	ICT	Health & Life Sciences	Central	Yes
G	Female	Scale	Yes	Infrastructure		Central	Yes
H	Female	Acquired	Yes	ICT		Central	Yes
I	Female	Scale	Yes	Services		Central	Yes
J	Female	Scale	Yes	ICT	Retail Digitization	Central	Yes
K	Female	Scale	Yes	ICT		Central	Yes
L	Female	Commercialization/Scale	Yes	ICT		Central	Yes
M	Female	Traction	Yes	Agriculture	ICT	Central	Yes
N	Female	Scale	Yes	ICT		Central	Yes
O	Female	Scale	Yes	ICT		Central	Yes
P	Female	Traction	Yes	ICT		Central	Yes
Q	Female	Commercialization	Yes	Health and Life Sciences	Manufacturing	Southern	Yes
R	Female	Scale	Yes	ICT		Central	Yes
S	Female	Scale	Yes	Pharma, Biotech		Central	Yes
T	Female	Traction	Yes	ICT, Life Sciences		Central	Yes
U	Female	Scale	Yes	Health and Life Sciences		Central	Yes
V	Female	Commercialization	Yes	Clean Tech	Natural Resources	Central	Yes
W	Female	Scale	Yes	ICT, Web3		Central	Yes
X	Female	Commercialization	Yes	Cleantech	Natural Resources	Central	Yes
Y	Female	Scale	Yes	ICT		Central	No
Z	Female	Scale	Yes	Pharma, Biotech		Central	Yes
A1	Female	Commercialization	Yes	Services		Central	No
A2	Female	Commercialization	Yes	Health and Life Sciences	Manufacturing	Central	Yes
A3	Female	Commercialization	Yes	Health and Life Sciences		Western	No
A4	Female	Commercialization	Yes	Health and Life Sciences		Northern	Yes
A5	Female	Traction	Yes	Circular Economy	Health and Life Science	Central	Yes
A6	Female	Commercialization	Yes	Natural Resources	Clean Tech	Central	Yes
A7	Female	Scale	Yes	Health and Life Sciences	Manufacturing	Central	No
A8	Female	Commercialization	Yes	Cleantech		Central	Yes
A9	Female	Traction	Yes	ICT		Southern	Yes
A10	Female	Commercialization	Yes	Health and Life Sciences		Central	Yes
A11	Female	Scale	Yes	Health and Life Sciences		Northern	Yes
A12	Female	Scale	Yes	Clean Tech	Agriculture, Fish, Food	Central	Yes
A13	Female	Concept/Create	Yes	Health and Life Sciences		Central	Yes
A14	Female	Scale	Yes	Agriculture, Fisheries		Central	Yes
A15	Female	Commercialization	Yes	ICT		Northern	Yes
A16	Female	Commercialization	Yes	Cleantech		Central	Yes
A17	Female	Traction	Yes	Cleantech		Central	Yes
A18	Female	Scale	Yes	Pharma, Biotech		Central	Yes
A19	Female	Scale	Yes	ICT		Central	Yes
A20	Female	Commercialization	Yes	ICT	Health and Life Science	Northern	Yes
A21	Female	Scale	Yes	ICT		Central	Yes
A22	Female	Scale	Yes	Health and Life Sciences		Central	Yes
A23	Female	Traction	Yes	Health and Life Sciences		Central	Yes
A24	Female	Commercialization	Yes	Cleantech		Central	Yes
A25	Female	Commercialization	Yes	Manufacturing	Clean Tech	Central	Yes
A26	Female	Traction	Yes	ICT	Services	Northern	Yes
A27	Female	Traction	Yes	Health and Life Sciences		Central	Yes
A28	Female	Scale	Yes	Health and Life Sciences		Central	Yes
A29	Female	Traction	Yes	Health and Life Sciences		Central	Yes
A30	Female	Scale	Yes	Health and Life Sciences		Central	Yes
A31	Female	Scale	Yes	Manufacturing		Nothern	Yes
A32	Female	Commercialization	Yes	Health and Life Sciences		Northern	Yes

The third-party interviewer sent the invitation letter through email who shared openly that the sessions' goal was to solicit deep, unfiltered, and constructive insight from women technology founders in Atlantic Canada. In addition, the letter confirmed that the women entrepreneurs and founders' insight and shared experiences collected through the interviews would help identify new recommendations on policy and government-supported programs. The third-party interviewers suggested that the respondents shed light on their lived barriers to success and in addition what supports could be in place and are working to their advantage. Once the letters had been received the women entrepreneurs' and founders, they had to indicate an interest to participate through email to the third-party interviewer. I did not have any contact with the interviewee's before, during or after the interviews. Box 1 provides an example of sample questions written into the invitation letter.

Box 1. Example sample questions provided in the pre-session letter

1. Have you participated in startup ecosystem programs or events? How much did you feel you "belonged" on a scale of 1-10. Why?
2. Entrevestor 2020 Startup Data Report says fourteen percent of Atlantic Canada start-ups are female-led and they raised just three percent of equity funding. What's your reaction to this data? Why?
3. What "startup ecosystem" support have you found most meaningful? Why? What tangible difference did it make in your business?
4. What start up ecosystem support have you engaged in that WASN'T useful? Why?
5. What are the 3 biggest barriers have you personally faced or observed in starting and growing your company? Be specific. Do you have ideas of how to eliminate/address these barriers? Eg, change the business, delay launch, avoid certain programs/events, etc.

6. What advice would you give funders about how to better support women entrepreneurs? Have you heard of programs/initiatives that are working elsewhere?

Kushel (2016) suggested that there is a systemic gap in the research on innovation activities performed by women. Most studies have focused on the innovation performed by men. A technique that is focused on understanding human language. The choice of applying internal validity to the case study meant that I could look at establishing a causal relationship. My hope in establishing this approach as a part of the invitation and interview process was to provide the female founders with a comfortable and open environment. This approach in turn would lead to a more natural flow of conversation and honest responses.

4.3 Data Analysis

Once the interviews were complete, the following step in the case analysis was to organize and connect to my qualitative data. I was coding for the frequency of a particular theme. Develop rules for the translation of the text into codes. Ensure that the research is consistent and coherent in the codes (Constable et al., 1994-2012). The respondent's data was obtained through a transcript and then coded manually. The following step was conducted to analyze and address each topic to identify what the data suggests. I used a discovery motive, to work through the analysis of each of the themes.

Once the interviews were complete, the third-party interviewer provided a personal recap of the sessions and the individual high-level key takeaways disseminated from the transcripts. The contract included a final report and presentation to the thirteen actors on the themes captured and

high-level analysis completed. Because the line of questioning was open ended and did not take a linear approach, it was important to take all the feedback, and interpret the responses.

The following step in the case analysis method was to organize and connect the interviews into the qualitative data to confirm the related subtopics in my unit of analysis, the descriptive and outline my hypothesis. The coding method used considered terms and frequency, as well as consistency and natural parallels between my findings and the third-party interviewers. To inform my observations, the coding process identified ongoing themes through shorthand representation of a more detailed complex set of issues and ideas. The themes that appeared both during the coding process were similar in nature and design to those presented by the third-party interviewer. This further validated the patterns identified through my analysis. The analysis aims to reach some inferences, lessons, or conclusions by condensing large amounts of data into relatively smaller, more manageable bits of understandable information (Anonymous, 2012).

Using success as the unit of analysis under each of the related subtopics I study in relation to the information given by the 24 female founders. The information gleaned focused on insights agreed upon, and collectively expressed by the respondents in relation to the service-providing organizations operating in support of the innovation economy.

This study has examined the continued factors deterring the success of women entrepreneurs and founders to inform the current research and identify barriers to access women founders experienced in three capacities: government priorities, policy development design and implementation and social network.

Table 5. Interview responses coded by unit of analysis

Unit of Analysis: Success				
Constraint	Code	Code Description	Interview Excerpts	Quotes
Political Priorities	Policy, trust, and process	Respondents reinforce the need to validate the actual impact of the Women's Entrepreneurs Strategy. The Women Entrepreneurship Strategy unites government resources under one single federal framework in Canada under four pillars: help women owned businesses grow, increase access to capital, improve access to federal business innovation, enhancing data and knowledge.	eighty precent of the women entrepreneurs and founders interviewed had leveraged some form of grant or non-dilutive repayable funding provided by the federal government Women Entrepreneurship Strategy.	"Are direct gender programs moving the needle for women founders?" "The criteria for funding should be explicitly stated"
Government policy: design	Improve access by design for women entrepreneurs and founders to: Capital	Respondents call for more accessible programming support through this strategy and primary research to be undertaken in the design process.	There needs to be greater transparency and accountability on how the programs are designed. All twenty-four respondents	"A program that adopts a bias towards someone means that it is moving the needs for female founders. It has a big picture understanding, open view on

	Business innovation services Skilled expertise Mentorship Advisory	Program fit and availability including rate of access to women entrepreneurs and founders.	suggested ecosystem quotas to encourage a stronger bias toward women.	metrics and inclusive less structured reporting"
Government policy: Implementation	Improve access and availability of current program in support of women entrepreneurs and founders.	There should be training for all program managers consistent throughout the innovation ecosystem after a program is launched. The front-line representatives do not use a progressive series of metrics adopted to female founders. The current programs 'hunt metrics' versus being flexible to new ways of classifying the growth and success as identified by women entrepreneurs and founders. The current implemented method of evaluation disproportionately holds women	A call for greater transparency and accountability in how the programs are working to enhance women entrepreneurs and founders. There was a call to action a review to understand more how each representative working on behalf of a program is advancing the ecosystem.	"I would encourage partners running the programs to take a bias towards women" "A bias towards speed and usefulness, taking a holistic approach and not just thinking of the funding program or department priorities, but taking a broader view" "There are no quotas, the current way still holds women back disproportionately" "A lot of us are not five-time founders. We might not be speaking the language or setting up a project in a way funders immediately understand. So, there is a real need for transparency in

		entrepreneurs and founders back.		how these programs can be accessed, by whom, who is getting funding and what success looks like so there can be accountability on both sides"
Social networks	Power representative versus gatekeeper	Discrimination felt by women entrepreneurs and founders while seeking advisory or financial support. The relationship between industry and government. The standard of expertise shared by key actors working on behalf of the innovation ecosystem (government, business incubator and accelerator, researchers, program facilitators, coaches, mentors, advisors, managers.)	There is an influence of peer groups that still exists today working in the innovation ecosystem. The success of a female entrepreneur or founder can be correlated to the impact of and influence of their: family, friends, advisors, mentorship and coaches.	"We need representatives that take a bias towards speed and usefulness, taking a holistic approach and not just thinking of the funding program, or departmental priorities, but taking a broader view" I still hear "What if your business is not in fact investment worthy? The bar keeps changing, we need proactive support that understands how <u>we do</u> business"

4.4 Conclusion

The case study design analysis provided primary research on the current barriers experienced through third party industry representatives and women high growth entrepreneurs and founders in Atlantic Canada. The objective was to gain real world insight of lived experiences from a sample of high growth women entrepreneurs and founders in the twenty first century. The twenty four respondents were provided a safe environment to share in their personal unfiltered experiences. This case study provided a robust description of the innovation ecosystem experience and the analysis suggested a new barrier to success with limited study through research.

Chapter 5. Results and discussion

5.1 Key Findings Political

During the interviews, it was highlighted that there are not enough publicly published results showing the positive impact of government-funded gender specific programming. The women founders interviewed mentioned that they would like to know key statistics associated to how these gender focused programs are aiding in the advancement of female entrepreneurs and founders. Much like Mason and Brown (2014) suggested, we know that entrepreneurship is not a "One size fits all" approach. Therefore prior to considering further investment in gender-based programming, a respondent questioned "Can we run numbers back through a logic model to figure out whether or not the behaviors that our government services are providing are resulting

in women scaling businesses?" The female founders questioned the authenticity of the political priorities such as the federal Women Entrepreneurship Strategy, which has committed over $125 million in program funding to go towards the advancement of women entrepreneurs and founders in Canada. The respondents stated the reason for questioning was due to the lack of results published by government.

The Feminist theory explored by Bryne et al. (2019) stated that the value systems that uphold projects that support women in the entrepreneurial ecosystem should advocate for social, political, and economic equity of women and men in society. In response, the Women's Entrepreneurship Strategy is meant to boost mentorship, networking, access to financing and skill development for women entrepreneurs and founders. The respondents shared that they felt there was enough community consultation with female entrepreneurs and founders prior to announcing the Women Entrepreneurship Strategy or the diverse funding calls under the strategy over the last five years.

"Are gender direct programs moving the needle for women founders?", said one respondent. It was stated during the interviews that the female entrepreneurs and founders feel it is extremely important for political priorities to link directly to the community of interest. However, there continues to be a systemic gap in research on innovation activities performed by women (Kuchel, 2016). Therefore, we can understand why the respondents questioned how the Women Entrepreneurship Strategy was informed and pointed out that federal funding is primarily allocated to third-party representatives such as not-for-profit organizations and post-secondary institutions. Much like the barriers to policy implementation explored during the literature

review, the women founders identified that third-party allocation does not help allow for direct access to increased funding or low-risk financing. Therefore, the programs designed through government policy go directly to supporting not-for-profit organizations, meaning that the government priority and policy design and implementation do not correlate to direct investment to founders, and do not remove the unconscious and conscious biases heavily embedded in the innovation ecosystem.

There is a longstanding technology skills gap in Canada and a need to fill the skills gap experienced by women entrepreneurs and founders. In 2016, less than one in three computer and engineering graduates in Canada self-identified as a female. The federal government committed to concentrating its efforts to advance access for women in two key areas: science, technology, engineering, and math (STEM), and entrepreneurial training. This commitment included establishing more women in the workforce, as Wood (2013) shared. However, almost ten years later, there continues to be skills development and technology gaps (De Laat, 2021). As shared through the State of Women's Ecosystem Report (2022), more research is needed to determine what works for whom and to address existing barriers, particularly in technology-oriented incubators where culture, policies, programs, and practices are often exclusionary (Cukier et al., 2022). The founders expressed a desire for technical training for non-technical founders and programming that would increase just-in-time access to technical experts who can help evaluate or provide checks on coding and development. This would include support for the development of products and early-stage wireframes without the founders having to take on full-time salaries.

5.2 Government Policy Design

The respondents raised that “Criteria for funding should be explicitly stated”. There was shared concern by over half of the respondents that the development of new funds and programs did not adopt a bias towards female entrepreneurs and founders during the program development phase. This reaffirms the research that outlines the way that negative gender stereotypes are embedded still today in policy development and as Brush et al. (2006) suggested, these stereotypes undermine female representation in the technical and scientific fields. One respondent pleaded “I would encourage partners to not be afraid of taking a bias toward women”. Furthermore, most respondents felt that government policy continues to develop through a one-gendered lens. Specific personality traits that tend to be associated with men (such as stability, extroversion, and willingness to take risks (Bode, 2019) have been applied to policy design when considering advancement of the entrepreneurship or innovation ecocystem. If a policy is designed through a male-gendered lens, without a bias towards women, programming dollars that aim to empower women entrepreneurs and founders will do the opposite. In turn, they will continue to encourage women to learn new personality traits that are recognized and respected as male traits in entrepreneurship. This will continue to reinforce the gender bias structures and undervalue the way that women and women founders conduct business and evaluate risk.

The respondents highlighted that they find it extremely difficult to meet pre-determined success metrics. The respondents often hear male founders or male frontline managers talking about success through a monetary indicator. In addition, the standard of evaluation for startups and scaleups is based on the monetary valuation of the business. “Oh yes, I hear all the time that a startup idea is being valued at ‘a billion dollars’.” said a respondent about multiple male founders

participating in the same program as her. When the respondents were asked about how they identify success indicators the focus was first on community impact and whether or not the business was solving a real need. Male dominance among investors and venture capitalists and traditions related to investment in male-dominated industries contribute to the gender skewness associated to how business evaluation methods have been developed Green et al. (2001).
The respondents considered success first and foremost as their business can continue to 'solve a massive problem'. In addition, the 90% found the respondents communicated that the program evaluation method and timelines associated to programs lengthy and disappointing. 100% of respondents asked the federal government to adapt the current priority, and to look at a new priority-based model in order build equal and increased access for technical training for women. This point confirms what was shared in the literature review, as women continue to be confronted with a lack of knowledge and access to knowledge, including lack of business acumen (Halkias et al., 2011).

The respondents communicated a strong need for more flexible and diverse metrics for programming, especially associated to the gender specific programs that are being developed and executed through the Women Entrepreneurship Strategy. "Program and funding that hunt metrics are not helpful, there is a need for a more flexible series of metrics adopted to further evaluate the founder strength of the startup using core innovation metrics and also other competencies". This verifies biases build into current government programs and methods of evaluation. Meaning that government must find a way to move away from the tradition method of evaluating companies and into new ways of classifying growth/success with a bias towards female

entrepreneurs. As one respondent highlighted sternly, “The current way holds women disproportionately”.

As a follow up to this point raised during the interviews, I researched what specific qualifications you need in Canada to work as a front-line staff advising for the innovation ecosystem. In Canada, there is no pre-requisite training to diversity and inclusion prior to advising for programs that have direct contact with female entrepreneurs and founders. The respondents communicated multiple times that there strong and continued biases against women operating in this system. The respondents suggested a new policy to instate mandatory training to cut down on the bias and red tape experienced by female founders. “There should be consistency of training and a minimum experience level achieved in education and experience, prior to working in the innovation ecosystem”.

The respondents shared that the ecosystem needs to *“Hire better talent.”* They expressed that through hiring more upskilled individuals, and more specifically, to bring more women technology advisors into Business Incubators and Accelerators. The founders expressed that stronger knowledge and skills would provide leadership from individuals who know how to make good investments, right down from the analyst level up to the partner level. “I would just say overhaul the organizations and bring in really, really good investors who find the good companies.”

100% of the respondents asked how each program representative is working to advance ecosystem quotas and prioritize the advancement of female entrepreneurs and founders. Multiple times the third-party interviewer heard a call for action in relation to the need for transparency,

direction, and more elevated advocacy work. Female entrepreneurs and founders requested expert advisory to allow them safe and guided exploration of next steps while with specific resources. “There is a need for explicitly stated criteria related to how funding is evaluated and allocated to startups”. There was a common request from the female entrepreneurs and founders for “aggressive, disproportionate funding programs to advance high growth women”. It was stated at least half a dozen times that frontline representatives and partners miss opportunities because of how female founders quantify and discuss their specific business opportunity. “The programs aren’t working to advance women founders fast enough and change the bias”.

The respondents communicated a feeling that there is not enough accountability when it comes to program development and execution for those in the position of policy development and implementation. It’s unknown by female founders participating in the innovation ecosystem if the gender specific programs are moving the needle for female founders. All twenty-four respondents questioned how programs and front-line workers are contributing to advance the ecosystem. One suggestion made by a female founder in response to the current programs guidelines is to build in specific actions for front-line managers must execute, such as offer hands-on help, and warm introductions to investors. In addition, the female founders requested less introductions to ‘coaches’ or ‘mentors’ and more introductions to investors or those individuals connected to early and later stage capital. The founders shared a preference for explicitly stated criteria related to how they meet the eligibility criteria of programs to secure funding and other supports. Moreover, they shared frustration at the lack of transparency in selection criteria, eligibility, and an ‘in the box mentality’ when it comes to federal programming.

Overall, grants and non-dilutive funding such as loans are considered powerful growth drivers by 100% of the respondents. However, the female entrepreneurs and founders communicated that this point should exclude the reporting process. “Reporting for grants is tedious, a lot of red tape in the application process and difficult reporting attached”.

5.3 Government policy implementation

The female entrepreneurs and founders shared that the representatives classified as ‘gatekeepers’ refused to use any diverse or progressive method when considering metrics. The respondents communicated a strong need for more flexible and diverse metrics for programming, especially the gender specific programs that are being supported through the Women Entrepreneurship Strategy. “Program and funding that only focus on pre-determined metrics are not helpful, there is a need for a more flexible series of metrics adopted to further evaluate the founder strength of the startup using core innovation metrics and also other competencies”. This would mean that government must find a way to move away from the traditional method of evaluating companies and into new ways of classifying growth/success with a bias towards female entrepreneurs. “The current way holds women disproportionately”. This point validates that although there are a variety of entrepreneurship programs, incubators, and financing options in Canada, women entrepreneurs currently face barriers accessing these supports, as stated by Cukier (2020).

The respondents noted lengthy timeline it took many of them to access programs or funding. One respondent shared that the initial contact to application and approval for government programming can act as a deterrent for many female entrepreneurs and founders. It can take between 6-12 months for funding. Female founders can lose confidence and momentum. This

point validates how women identify, build and develop their entrepreneurial idea and the idea that women founders and entrepreneurs are more risk adverse.

Twelve of the respondents communicated that frontline innovation managers need a consistent method to evaluate startups and more training on evaluation and risk taking. All twenty-four shared the opinion that there is not enough innovation and technology specific expertise working to support founders here in Nova Scotia. The biggest benefit has been frontline managers seeking out or building custom fit solutions for women founders. This means not just providing access to apply for one program or opportunity, but the 'power representative' taking the time to map out a specific and tailored solution that combines multiple options to leverage more than one opportunity for support. This was an interesting point of reference when looking for parallels between the literature review and case analysis. There has not been deep research into the specific skills and attributes a frontline manager or executive should hold when working with the innovation ecosystem or in a position dedicated to advancing female entrepreneurs and founders.

The female founders shared that those representatives classified as 'gatekeepers' refused to use any diverse or progressive method when considering metrics. The female founders were very specific in requesting transparency.

5.4 Social Networks

Of the twenty-four respondents, 80% of the female founders had leveraged some sort of government funding. During the interviews the respondents expressed deep concern associated to their ability to access government resources. They stated that their success in grant application

and with diverse funding programs heavily relied on the relationship with the front-line staff advising the program. The government backed programs, offer the frontline program managers a lot of autonomy in the decision-making process when evaluating if a women entrepreneur or founder does or does not fit the program criteria. 80% of the female founders interviewed cited multiple instances where they had worked with an Industry Technology Advisor who took on a "gatekeeper" role, showing little interest, curiosity or available expertise in the founder or venture industry. The respondents shared that having resources, funding and support heavily correlated to the front-line manager was 'scary' and 'horrible' as it's unknown who had been through unconscious bias training and diversity and inclusion programming. This finding did not directly correlate to any of the secondary research highlighted through my literature review. There is little research into the relationship between a female entrepreneur or founder and a front-line program manager or advisor working in the innovation ecosystem. The topic of gender discrimination, and direct one to one engagement.

During the three interviews, there was a consistent theme outlined by the respondent associated to the importance of the relationship between the female founder and frontline innovation ecosystem manager. The individuals referred to as front-line workers or innovation ecosystem managers are the individuals whose job it is to manage programming and engage daily with female entrepreneurs and founders. Many of these roles would be attached to business incubators and accelerators, post-secondary institutions, or government. The respondents divided the individuals acting on the frontline who work daily with women entrepreneurs and founders and who are responsible for managing innovation ecosystem programs into two different classifications: gatekeepers, or power representatives. These terms were used in the first session

with founders. The two terms classified by the respondents, have not been heard of or discussed in government or literature to date. During the next two sessions, when respondents were describing the different treatment received by front-line managers, the third-party interviewer shared these descriptions and 100% of the respondents agreed that these two classifications spoke directly to their personal experience. Throughout the three sessions, the respondents provided several strong insights into the differences between the two personalities:

"A power representative is an advisor that will think outside of the box, be creative and find avenues to fit funding and support models to the founder's needs and opportunity". All the female founders shared similar sentiments communicating that in all stages of business having a power representative is crucial to success and advancement. "The rep said, 'please contact me.' And that was the turning point for my whole business. I would have never had those doors opened for me without him." Moreover, they described power representatives as those who are willing to get curious, open their networks and pull out the stops. "Hands down the biggest help has been custom fit funding solutions tailored to me, my business, and our needs at the time. This custom fit solution was born out of the relationship I had with my rep." Alternatively, a *Gatekeeper* is an advisor who acts with a strong conscious or unconscious bias towards female founders. The majority of the respondents explicitly stated that gatekeepers do not understand how women entrepreneurs and founders often establish themselves differently. Over half of the respondents felt that female founders discuss business opportunities differently than the male advisors they are paired with. In their personal shared experiences, gatekeepers devalue how women approach building the business, and evaluate or take risk differently than male founders.

The respondents shared that those representatives classified as ‘gatekeepers’ refused to use any diverse or progressive method when considering key growth metrics and used words such as paternalistic, traditional, and conservative. “They don’t understand how we build our businesses to get where we can tick those boxes”. The ‘box’ mentality was referred to often during each of the three sessions. Several of the respondents at different stages of growth had been told that they did not ‘fit the box’, therefore they decided early on, that the innovation ecosystem grants and programs were not available to them. The ‘You don’t fit the box’ quote was highlighted more than a dozen times during interviews. Furthermore, they shared frustration in the fact that there was not one specific overarching evaluation methodology discussed in relation to how a female founder can fit or not fit the box. The founders expressed concerns and frustration that there are multiple circumstances they know of where two founders with very similar projects get a different response from frontline workers. One is advocated for and moves ahead, whereas other is denied without reasoning or transparency in the evaluation process. This is not a new concept and was presented in the literature review in terms of the challenges of red-tape and bureaucracy. However, the personal description of either working with a front-line worker as a deterrent or ally is a concept less presented in research. The respondents expressed deep concern that access to training, non-dilutive funds, and programs are so heavily correlated to the advisor working on behalf of the ecosystem.

The interviews transcripts provided much needed context into the deep chasm experienced by female founders working with gatekeepers versus those working with power-representatives. The respondents from each session communicated their personal fear of encoutering a gatekeeper multiple times while outlining the continued bias against women and stated that they would

recommend a stronger culture for whistle blowing so that the gatekeepers working in the system can become known, and either removed or go through mandatory diversity and inclusion training. “To underscore, it really depends on who you get. And it should not depend on who you get in any of these agencies”. This information signals that female entrepreneurs and founders face a continued blatant bias which in their experience directly correlates to a lack of early-stage financing, and limits the personal assistance received to support the founders next stage of scale. This was an interesting point, given that the relationship between a founder, frontline worker and financial institution or venture capital firm was not presented as a core factor or underlining theme in the literature review. While the number of said gatekeepers is small and not all founders had direct experience with them, the impact of these experiences on some of the women was more than significant. “There’s a top-down approach to working with founders as though we are charity cases that need handouts. I think if you position things differently and put founders in the driver’s seat, especially female founders, you’d see a huge shift.” There were specific examples shared of a frontline manager writing off a female founder’s business idea and communicating this outwardly to the rest of the ecosystem. Of the twenty for, ten respondents felt impacted by gatekeepers and felt that the relationship had a significant impact on the founder’s rate of success with government grants, programs and network creation.

A second reoccurring theme that differed from the research presented in the literature review shared by over half of the respondents refers to the lack of deep technical training or experience for frontline workers in entrepreneurship and the innovation ecosystem. 70% of the respondents did not feel they “should” take mentorship and guidance from anyone who was not themselves proven entrepreneurs who had demonstrated that they knew how to scale a company. The

respondents concurred that there should be consistency of training and minimum experience levels to work in the innovation ecosystem, and questioned why frontline workers are advising female entrepreneurs and founders on what they need when they do not have the technical training or know how. "The experience is mind boggling how different it is depending on your advisor" and "there is a lack of sophistication associated to advisors operating in the ecosystem". The respondents labeled some advisors as 'metric hunter' versus visionary investors who understand how women founders build business and see the larger opportunities. The respondents suggested that a stronger bias toward women could be associated to the limited knowledge and experience of frontline workers in the technology and innovation ecosystem. In addition, this lack of experience provides the frontline worker with a limited capacity or interest to approach the founder with an 'out of the box' mentality. Marlowe and Swail (2013) stated, "Prevailing analytical research and methodological conservatism in the mainstream entrepreneurship research does little to provide in-depth, theoretical insight to advance our critical understanding of women's experiences in entrepreneurship"

"Agency representatives and stakeholders frequently misunderstand or devalue how female founders take on risk and build their businesses." All the female founders interviewed communicated how much they enjoyed being matched with female managers and technology representatives. More than half expressed that the ecosystem partners have not been as helpful as they had hoped in making introductions to investors. In addition, 70% of the female founders interviewed, made a point of sharing that female founders are being asked different questions than their male counterparts. It was also communicated that the types of questions being asked, are not consistent to those that investors find relevant, showing a lack of knowledge. Good investors

would note that there are bias questions or big vision questions, often the female founders noted being approached with bias questioning. In 2021 a Trust Radius report, shared that 78% of women in tech, feel they have to work harder than their male coworkers to prove their worth. Women in tech are four times more likely than men to see gender bias as an obstacle to promotion.

Most studies sight access to financing and family support as the main hurdles faced by women entrepreneurs (Zainuddin et al. 2017). The respondents did not identify a constraint being associated to family support, but did strongly identify that access to financing is a barrier. "Raising equity funding is an isolating experience. There is a deep chasm between early stage 'easy' money (i.e., the grants mentioned above) and equity funding". In addition, several women founders who are actively engaged in seeking equity funding shared they feel there's opportunity for even more practical support to connect investor-ready founders to actual money via targeted introductions. Furthermore, the respondents highlighted that they had disappointing experiences with ecosystem partners and frontline managers when looking for financing support or warm introductions to funders. They expressed that ecosystem partners have not been as helpful as they'd hoped in making introductions to investors. Others mentioned that, while they appreciate the funding sources available, there was often big paperwork associated with small funding pots such as less than $20,000 and that they would like to see more grants that offer larger chunks of money that can make a meaningful, long-term difference. This reassures the findings from the literature review and specific data on the difference and gender disparities in accessing financing and in terms of financial barriers experienced in entrepreneurship and innovation by women. At least half of the respondents communicated that they could get access to funding and grants; however, the timeline between application to approval is extremely long and can halt their

moment. Second to this, if the grant application is not successful, they explained that there is little feedback given from the frontline managers as to why they were unsuccessful. All twenty-four of the female founders connected to risk aversion and communicated non-repayable grants, and cash from up front grants that allowed founders to make investments in growth without digging into cash flow. Women need to continue to leverage this type of moment to stay comfortable with the idea of taking on more risk, a faster process as described by the respondents would mitigate risk and ensure more comfort with taking on risk.

5.5 Case Analysis Conclusion

The primary research collection and analysis highlighted several consistencies between the data collection reported on between the 1980's-twenty first century from the literature review. However, the social network findings differentiated themselves significantly. The primary analysis focused heavily on the specific relationship, skills, and attributes that a frontline manager or executive should have when working directly with women entrepreneurs or founders. The discussion during all three interviews was weighted to the direct power of help (power representatives) or hinderance (gatekeppers) this relationship holds.

Chapter 6. Conclusion

The global landscape of entrepreneurship and innovation is prioritizing the advancement of female entrepreneurs and founders. A recent analysis by the Boston Consulting Group published in 2019, suggested that if women and men were to participate equally as entrepreneurs, the total global GDP could rise by approximately 3% to 6%, increasing the global economy by half from $2.5 trilling to $5 trillion Unnikrishnan (2019).

In order to provide a better understanding of the role of government policy to support women entrepreneurship, the objective of this thesis is to enhance the current research outlining constraints and drivers for female entrepreneurs and founders globally. Moreover, the study identifies recommendations on how we can adapt the political priorities and agenda for policy makers to remove systemic barriers for female entrepreneurs and founders in Canada. There is capacity for new and improved policy making by better understanding the diverse elements associated to the barriers that female entrepreneurs and founders are faced today. This work elaborates well on how the structure of the priorities, policy design and implementation will or will not prevent on informing positive change for female entrepreneurs and founders. Research at the intersection of gender and entrepreneurship demonstrates that the phenomenon of entrepreneurship is deeply gendered (Ahl, 2006).

During this study, I first conducted a literature review to further inform my understanding of the diverse factors and themed constraints experienced by female founders and entrepreneurs globally. The research showed that barriers to access, support and success as sighted in the 1980s (see Table. 1) were consistent with my primary research executed in 2022.

I then implemented a case analysis method based on primary data. I first convened 13 key actors working in executive-level positions within the Canadian innovation and entrepreneurship ecosystem. This initial consultation provided feedback based on their experience working through the development, iterative delivery of new startup and entrepreneurship programming for female founders and entrepreneurs. The results of bringing this group together informed my understanding of the perceived constraints prevalent in Canada. Second, it informed the relevancy of my next step in the case analysis. I then hired a third-party interviewer to conduct three separate one-on-one sessions with a total of twenty-four female respondents. The participants were chosen from a pipeline of over 150 different female founders. There were constraints applied to the selection process when considering what founders to invite to participate in the sessions. Each session was conducted as a group interview with pre-determined questions provided to the third-party interviewer. Once the three sessions were complete, I analyzed the interviews and pulled out key themes to inform my understanding of the barriers experienced by female entrepreneurs and founders during three stages of policy: policy priorities, policy design and implementation, and networks with frontline representatives.

The case analysis results heavily weighted the role of a female entrepreneur's social network as a barrier or driver of success. In this study, social network is defined as the individual's family, friends, coaches, advisory group, and frontline workers managing the federal and provincially funded business development and start-up programs. More specifically the respondents classified their relationship as a frontline program manager or executive as working with either a gatekeeper or power representative. A gate keeper was described as a front-line worker that

enters into the professional relationship acting as a deterrent, while the gatekeeper was described as an ally. There should be continued research on the relationship between a female entrepreneur or founder, and a front-line program manager or advisor working in the innovation ecosystem.

6.1 Recommendations for policy-making

The case analysis presented key themes and recommendations to improve the unmet needs of female founders and give the opportunity for stronger access to tailored positive resources to enhance business advancement.

- There is lack of sophistication on the front lines of business incubators and accelerators. There is a need for upskilling and specific technical as well as diversity and inclusion training for frontline workers managing programs and responsible for developing relationships with female entrepreneurs and founders.
- The government needs to approach policy development with specific gender lens and the current policy should adopt a bias towards women that will be translated into a bias position. If women are considered first, what prevents the policymaker from enacting change. Non-gender specific lens and a bias position.
- It should be recognized that women entrepreneurs and founders have distinct ways of ideating, developing, launching, growing, and scaling a business
- There is a strong need for gender-specific policy and program design as well as the specific government-led interventions to decrease the discrimination that female entrepreneurs and founders are subject to.

- There should be a wide-scale review of frontline workers, intending to develop a new community of practice and training material for all frontline workers.
- A strategic review of business incubators and accelerators is needed, and all organizations engaged in business development programming to identify and address the sources of and exclusion that affect women entrepreneurs contribute to address barriers that female founders and entrepreneurs face.
- There should be deep research into the specific skills and attributes a frontline manager or executive should hold when working in the innovation ecosystem, or in a position dedicated to advancing female entrepreneurs and founders.
- To explore specific education, experience and personality traits that drive successful front-line advisory and coaching for female founders and entrepreneurs.

I hope my findings will impact a timely change within the government of Canada. By encouraging a re-write of current policy to include new implementation tactics and a gender focused design. The Canadian entrepreneurship and innovation ecosystem can adopt a bias towards women. Such change will help ensure a positive impact and may help to achieve equal standards and fair treatment for female entrepreneurs and founders. This work is extremely necessary considering women make up 51% of the population and women owned businesses are an integral part of the entrepreneurship and innovation in Canada and globally. Women choosing entrepreneurship and innovation-driven career paths will continue to grow and can drive new socially conscious community impact and economic development.

6.2 Limitations and future directions

The main limitation of this study is the small sample size. The number of respondents interviewed does not completely capture the full population of high-growth female entrepreneurs and entrepreneurs operating in Canada. Furthermore, the respondents were primarily based in Atlantic Canada and it is important to consider that each Province and Territory provides different resources to female entrepreneurs and founders. The respondents were only speaking to their experience in Atlantic-Canada and not reflecting on the Canada-wide programming of Government Departments and Agencies. However, the methods section in this thesis provides detail indications in case the study is replicated in other regions in Canada.

The literature review was comprehensive; however, there several ecosystem dimensions worth continued exploration. To better understand how different countries have evolved government priorities by re-writing policy through a gender specific lens, and how this improved women entrepreneurs and founders experience deserve further attention for policy recommendations. There has not been deep research into the specific skills and attributes a frontline manager or executive should hold when working with the innovation ecosystem or in a position dedicated to advancing female entrepreneurs and founders. Moreover, the personal description of either working with a front-line worker acting as a deterrent or ally is a concept less presented in research. A very important finding, tha I identified as a gap in literature, is the need for continued research on the relationship between a female entrepreneur or founder, and a front-line program manager or advisor working in the innovation ecosystem.

One major contribution of my study is the need for further exploration into the specific education, experience and personality traits that drive successful front line advisory and coaching

for female founders and entrepreneurs. The Canadian government should have a global benchmark to inform what educational programs are being pursued and are mandatory for frontline workers responsible for management programming in other innovation and entrepreneurial ecosystems. Moreover, future research, could explore the relationship between success drivers for entrepreneurs and the intersectionality of support received from a spouse or partners. Such exploration would need to have a different method of qualitative investigation and questioning.

Lastly, it would be helpful to explore policy changes and the implications for civil servants if frontline workers or those individuals working for a government funded business incubator and accelerators have met a particular standard of expertise. The exploration of other government systems and standards for education and training could be an important element to address gender bias.

Bibliography

57 Analysis of Qualitative Interview Data. (2012). Retrieved from British Columbia/Yukon Open Authoring Platform: https://saylordotorg.github.io/text_principles-of-sociological-inquiry-qualitative-and-quantitative-methods/s12-02-qualitative-interview-techniqu.html

A. Hochschild, A. M. (2012). The Second Shift: Working Families and the Revolution at Home. *Penguin*.

Ahl, H. &. (2012). Exploring the dynamics of gender, feminism and entrepreneurship: advancing debate to escape a dead end? *Organization Science , 19(5)*, 543-562.

Ahl, H. (2006). Why Research on Women Entrepreneurs Need New Directions. *Entrepreneurship Theory and Practice, 30(5)*, 1-27.

Ahmad, S. (2011). Evidence of the characteristics of women entrepreneurs in the Kingdom of Saudi Arabia: an empirical investigation. *International Journal of Gender and Entrepreneurship, Vol 3 No. 2*, 123-143.

Al, M. D. (n.d.). Factors associated with business and family success: A comparions of single manager and dual manager family business household. *Journal of Family and Economics Value Issues (22) 1*.

Alsos, G. I. (2006). New venture financing and subsequent business growth in men and women-led business. . *Entrepreneurship Theory and Practice 30(5)*, 667-686.

Ashcraft, C., McLain, B., & Eger, E. (2016). *Women in Tech: The Facts.* Colorado: National Center for Women Information Technology .

Bittner, B. L. (2021, February 25). *Women-Led Statups Received just 2.3% of VC Funding in 2020.* Retrieved from Harvard Business Review: https://hbr.org/2021/02/women-led-startups-received-just-2-3-of-vc-funding-in-2020

Azizan Zainuddin, F. P. (2017). The 21st Century Challenges Among Women Entrepreneurs: Revisitng the Literature . *Computational and Theoretical Nanoscience* , 2-4.

Berglund, K. (n.d.). Fighting agains all odds: entrepreneurship education as employability training". *Epherma, Vol 13 No. 4*, 717-735.

Bode, E. B. (2019). "Worker Personality: Another Skill Bias Beyond Education in the Digital Age.". *German Economic Review*, 254-294.

Borgonovi, F., Centurelli, R., Dernis, H., Gundke, R., Horvat, P., Jamet, S., . . . Squicciarini, M. (2018). Bridging the Gender Divide. *OECD*, 5-10.

Borras, S. (2019). "Domestic Capacity to Deliver Innovative Solutions for Grand Social Challenges" in stone. In K. Diane & Maloney, *The Oxford Handbook of Global Policy and Transational Administration.* Oxford Univesrity Press .

Bromley, D. (1986). *The Case-Study Method in Psychology and Related Disciplines.* Great Britain : John Wiley.

Bromley, D. (1986). The Case-Study Method in Psychology and Related Disciplines. *Great Britain: John Wiley*.

Brown, T. (2009). *Change By Design .* Harper Business .

Brush, C. (1992). "Research of women business owners: Past trends, a new perspective, future directions". *Entrepreneursihp Theory and Practice, 16(4)*, 5-30.

Budig, M. (2005). Gender, self-employment, and earnings: The interlocking structures of family and professional status . *Gend. Soc. 20* , 725-753.

Bulchand-Gidumal, C. D.-S. (2021). Econometric Estimation of the Factors That Influence Startup Success. *Sustainability, 13*, 2242.

Buttner , E. H., & Rosen, B. (1989). Funding new business ventures: Are decision-makers biased against women entrepreneurs? . *Journal of Business Venturing (4)*, 249-261.

Byrne, J. F. (2019). Role models and women entrepreneurs: Entrepreneurial superwoman has her say. *Journal of Small Business Management, 57(1)*, 97-106.

C. Brush, N. C. (2006). Growth Oriented Women Entrepreneurs and Their Business. *Women's entrepreneurship in the United States*.

C. G. Brush, A. B. (2009). *Internatinoal Journal of Gender and Entrepreneurship 1(8)*.

C.G. Brush, N. C. (2003). Venture capital access: is gender an issue? In the emergence of entrepreneurship policy: governance. *Campbridge University Press*, 141-154.

Calas, M. &. (2006). 1.8 from the 'woman's point of view' ten years later: Towards a feminist organization studies. In C. H. S.R. Clegg, *The Sage handbook of organization studies* (p. 284). SAGE Publications Inc.

Cassar, G. (2006). Entrepreneur opportunity costs and intended venture growth. *Journal of Business Venturing, 21(5)*, 610-632.

Estrada, C. S. (2022, July 6). *Women, SMEs and sustainable development - lessons learnt for the road ahead.* Retrieved from United Nations Industrial Development Organization: https://www.unido.org/stories/women-smes-and-sustainable-development-lessons-learnt-road-ahead#:~:text=Women%20entrepreneurs%20are%20active%20agents%20of%20change%20to,microenterprises%20and%20small%20and%20medium%20enterprises%20%28SMEs%29%20persist.

Chapman, L. (2022, January 11). *Female Founders Raised Just 2% of Venture Capital Money in 2021.* Retrieved from Bloomberg : https://www.bloomberg.com/news/articles/2022-01-11/women-founders-raised-just-2-of-venture-capital-money-last-year

Chauke, M. N. (2019). High Growth Women Entrepreneurs Induces Women Entrepreneurship Theory. *Proceedings of the 2nd international conference on gender research (ICGR 219)* (p. 694). Rome: ICGR.

Chauke, M., & Ndaba, Z. (2019). High Growth Women Entrepreneurs Induces Women Entrepreneurship Theory . *ACAD Conferences LTD.* , 693-699.

Clance, P. a. (1978). The imposter phenomenon in high achieving women: dynamics and therapeutic intervention. . *Psychotherapy: Theory, Research and Practice, Vol. 15 No. 3*, 241-247.

Clance, P., Imes, S., & al., e. (1978). "The imposter phenomenon in high achieving women: dynamics and therapeutic intervention". *Psychotherapy: Theory, Research and Practice, Vol. 15 (3)*, 303-319.

Cliff, J. E. (1998). Does one size fit all? Exploring the relationship between attitudes towards growth, gender and business size. . *Journal of Business Venturing 13(6)*, 523-542.

Coleman, S. (2016). Gender, entrepreneurship and firm performance: recent research and considerations of context. In M. C. (Eds.), *Handbook on well-being working women* (pp. 375-391). Dordrecht: Springer Science.

Commision, O. E. (2019). The missing entrepreneurs: Policies for inclusive entrepreneurship in Europe . *OECD Publishing* .

Constable, R., Cowell, M., Zornek, S., Golden, D., Hartvigsen, J., Morgan , K., . . . Palmquist, M. (1994-2012). *Conducting Ethnographic Studies, Observational Research, and Narrative Inquiry.* Retrieved from Writing Center at Colorado State University: https://writing.colostate.edu/guides/guide.cfm?guideid=63

Cooper, A. C., & Artz, K. W. (1996). Determinants of satisfaction for entrepreneurs . *Journal of Business VEnturing (10)*, 439-457.

Cukier, W. C. (2022). The State of Women's Entrepreneurship in Canada . *Womnes Entrepreneurship Knowledge Hub*.

Cukier, W. M. (2022, 03 28). *The State of Women's Entrepreneurship in Canada 2022 .* Retrieved from Women Entrepreneurship Knowledge Hub : https://wekh.ca/research/the-state-of-womens-entrepreneurship-in-canada-2022/

Cukier, W., Chavoushi, H. Z., & Borova, O. (2022). *The State of Women's Entrepreneurship in Canada 2022.* Toronto: Womens Entrepreneurship Knowledge Hub.

D. Halkias, C. N. (2011). *Management Research Review, 34*, 221.

Kanze D., M. A. (2020). Evidence that investors penalize female founders for lack of industry fit. . *Science Advances, 6(48)*, 1260-1262.

Davis, A. E. (2012). Understanding gendered variations in business growth intentions across the life course. . *Entrepreneurship Theory and Practice* , 495-515.

Davis, M. H., Hall, J. A., & Mayer, P. S. (2016). Developing a new measure of entrepreneurial mindset: Realiability, validitiy, and implications for practicioners. *Consulting Psychology Journal: Practice and Research 68(1)*, 21-48.

Dawley, S. (2013). Creating New Paths? Offshore wind, policy activism, and peripheral region development. . *Economic Geography* .

De Laat, K. &. (2020, October 27). *Growing their own way: High-growth women entrepreneurs in Canada.* Retrieved from Brookfield Institute for Innovation + Entrepreneurship, Women

Entrepreneurship KNowledge Hub : https://wekh.ca/wp-content/uploads/2020/10/GrowingTheirOwnWay-Report.pdf

De Laat, K. &. (2020, October 27). *Growing their own way: High-growth women entrepreneurs in Canada.* Retrieved from WEKH.ca: https://WEKH.ca/wp-content/uploads/2020/10/GrowingTheirOwnWay-Report.pdf

De Latt, K. H. (2020). Growing Their Own Way: High-Growth Women Entrepreneurs in Canada . *Brookfield Institute for Innovation and Entrepreneursip*.

Desjardin, J. (2018, January 23). *How gender diversity enhances the bottom line.* Retrieved from VIsual Capitalist: https://www.visualcapitalist.com/gender-diversity-bottom-line/

Deutsch, F. M. (2007). "Undoing Gender." . *Gender & Society 21(1)*, 106-127.

Dhaliwal S., 2. (2000). Entrepreneurship-a learing process: the experience of Adian female entrepreneurs and women in business. *Education and Training, 42(8)*.

Adrien M., M. S. (1999). Women's Entrepreneurship in Canada: All that Glitters is not Gold. *Univesalia Occasional Paper No.39*, 1-13.

Drine, I. (2011). Supporting Women Entrepreneurs in Tunisia . *ISG-University of Sousse*.

Duberly, J. &. (2013). The career identities of 'mumpreneurs': Women's experiences of combining enterprise and motherhood. International Small Business Journal, 31(6). *International Small Business Journal, 31(6)*, 629-651.

E. A. Dionco-Adetayo, J. T. (2005, January). *Evalution of policy implementation in women entrepreneurship development.* Retrieved from Womenable: www.womenable.com/userfiles/downloads/ICSB_bestWOBpaper_2005.pdf)

E. M. Fischer, A. R. (1993). *Journal of Business Venturing* , 8,151.

E.J. Gatewood, N. C. (2003). Women Entrepreneurs, Their Ventures and the VEnture Captial Industry: An Annotated Bibliography. *Entrepreneurship and Small Business Research Institute*.

Eddleston, K. &. (2008). The role of gender identity in explaining sex differences in business owners' career satisfier preferences. . *Journal of Business Venturing 23(2)*, 244-256.

Entrepreneurial Ecosystem and the role of the Entrepreneur. (2022). Retrieved from Entrepreneur Scan: test, tools & training: https://entrepreneurscan.com/blog/entrepreneurial-ecosystems/#:~:text=To%20realize%20growth%20and%20innovation%2C%20the%20ecosystem%20must,and%20his%20company%20in%20a%20region%20or%20country.

Experiences of entrepreneurship as a life skill. (2017). Retrieved from Babson Entrepreneur Experience Lab: http://elab.businessinnovationfactory.com/elements/experiences-entrepreneurship-life-skill

F.N. Maouchi, e. a. (2014). *International Journal of Development and Sustainability (3)*, 3,466.

Fairlie, R. &. (2014). Evaluating entrepreneurs preception of success: development of a measurement scale. *Internationl Journal of Entrepreneurial Behaviour & Research*, 375.

Fernandes , C., Moacir, M., Sbragia, R., & Borini, F. (2016). Strategic assets in technology-based incubators in Brazil. *Department of Business Administration*, 154-158.

Ferrell, D., & F, G. (2017). *The Online Platform Economy: Has Growth Peaked*. Retrieved from JP Morgan Chase Institute: http://dx.doi.org/10.2139/ssrn.2911194

Forum, W. E. (2017). *The Gender Gap Report 2016.* Geneva: Wold Economic Forum.

Foss, L. H. (2019). Women's entrepreneurship policy research: A 30-year review of the evidence . *Small Business Economics, 53(2)*, 409-429.

Glasner, J. (2021, August 18). *Here Are The New 2021 Unicorn Startups Founded By Women .* Retrieved from Crunchbase: https://news.crunchbase.com/diversity/here-are-the-new-2021-unicorn-startups-founded-by-women/

Goffee, R. a. (1983). Business ownership and women's subordination: a preliminary study of female proprieters. *The Sociological Review*.

Government of Canada . (2021, 08 11). Retrieved from Atlantic Canada Opportunities Agency: http://portal13.acoa-apeca.gc.ca/Eng/Champion%20Files/Pages/Start-Up-Ecosystems.aspx

Government of Canada. (2018, 10 19). Retrieved from Minister Ng. Announces funding for women's entrepreneurship: https://www.canada.ca/en/innovation-science-economic-development/news/2018/10/minister-ng-announces-funding-for-womens-entrepreneurship.html

Government of Canada. (2022, 07 15). Retrieved from https://www.canada.ca/en/atlantic-canada-opportunities.html.

Goyal, M., & Parkash, J. (2011). *International Journal of Multidisciplinary Research 1(5)*.

Grabher, G. (1993). The weakness of strong ties; The lock-in of regional development in The Rhur area. *The Embedded Firm: On the the Socioeconomics of Industrial Networks*, 255-277.

Grant, K. R. (2021). Assessing the participation and success of women entrepreneurs in uncorn startups. *Source: Grant and Rahman (2021)* (pp. 394-406). Crunchbase.

Grant, K., & Rahman , S. (2021). Assessing the participation and success of women entrepreneurs in unicorn startups. *European Conference on Innovation and Entrepreneurship 1* (pp. 394-406). Crunchbase News .

Greene, P. B. (2001). Patterns of venture capital funding: is gender a factor . *Venture Capital, 3(1)*, 63-83.

Greene, P. B. (2001). Patterns of venture captial funding: Is gender a factor? *Venture Captial 3(1)*, 63-83.

Grillitsch, M., Hansen, T., Coenen, L., Miorner, J., & Moodysson, J. (2019). Innovation policy for system-wide transfromation: The case of strategic innovation programmes (SIPs) in Sweden. *Research Policy 48(4)*, 1048-1061.

Haber, S. L. (2016). Driving wealth creation and social development in Ontario . *Global Entrepreneurs Monitor*.

Haber, S., Lo, M., & Davis, C. H. (2016). *Driving wealth creation and social development in Ontario.* Global Entrepreneurs Monitor.

Hanson, S. (2009). "Changing Places through Women's Entrepreneurship". *Economic Geography 85 (3)*, 245-269.

Hassink, R. (2010). Locked in decline? On the role of regional lock-ins old industrial areas. *The handbook of Evolutionary Economic Geography* , 450-468.

Hechavarria, D. T. (2016). Taking care of business: The impact of culture and gender on entrepreneurs' blended value creation goals. *Small Business Economics, 48(1)*, 225-257.

Hendratmi A., S. P. (2018). *Role of Government Support and Incubator to Success Behavrious of Women Entrepreneurs: Indonesia Women Entrepreneurs Association.* Polish Journal of Management Studies .

Henry, C. ,. (2016). Gender and entrepreneurship research: a review of methodological approaches . *International Small Business Journal 34(3)*, 217-341.

Hiemstra, A. v., & Frese, M. (2006). Entrepreneurship in the Street Food Sector of Vietnam Assessment of Psychological Success and Failures. *Journale Small Business Management, 44(21)*, 478.

Hirdman, Y. 1. (1988). Genussystemet - Reflexioner Kring Kvinnors Sociala Underordning. *Kvinnoventenskaplig Tidskrift 3*, 49-63.

Hisrich, R. (1989). Women entrepreneurs: problems and prescriptions for success in the future in Hagan. In O. R. Hagan, *Women Owned Business* (pp. 3-33). New York : Praeger.

Hoang, H. G. (2010). Becoming a founder: how founder role identity affects entrepreneurial transitions and persistence in founding. . *Journal of Business Venturing, 25(1)*, 41-53.

Ivany , R., D'Entremont, I., Christmas, Dan, Fuller, Susanna, . . . John. (2014). *The Report of the Nova Scotia Commission on Building Our New Economy.* Halifax .

J. Canning, M. H. (2012). Women at the Wheel: Do Female Executives Drive Start-up Success. *Down Jones and Company*.

J.B. Sorensen, A. S. (2014). Entrepreneurship as a mobility process . *Am. Sociol. Rev., 79(2)*, 328-349.

James Okrah, A. N. (2018). "Exploring the Factors of Startup Success and Growth . *The Business & Management Review. Vol.9.* , 229-237.

Jennings, J. E. (2013). Research on women entrepreneurs: challenges to (and from) the broader entrepreneurship literature . *Academy of Management Annals, 7(1)*, 661-713.

Jones, K. &. (2015). Rendering sexism invisitble in workplace narratives. A narrative analysis of female entrepreneurs' stories of not being talked to by men. . *Gender, Work & Organization, 25(5)*, 671-711.

Jones, S. (2014). Gendered discourses of entrepreneurshiop in UK higher education: the fictive entrepreneur and fictive student" . *International Small Business Journal, Vol 32 No. 3, pp. 237-258*.

Joyce A. Strawser, D. M. (2021). Gender and entrepreneurships: Research frameowkrs, barriers and opportunities for women entrepreneurship worldwide. *Journal of Small Business Management 59(1)*, 1-15.

Kanze, D., Conley , M. A., Tyler , O. G., Damon, P. J., & Merluzzi, J. (2020). Evidence that investors penalize feamel founders for lack of industry fit. *Science Advances* .

Kelley, D. B. (2017). Women's Entrepreneurship 2016/2017 report. *Global Entrepreneurship Research Association*.

Kinyanjui, M. N. (2006). Overcoming Barriers to Enterprise Growth: The Experience of MSEs in Rural Kenya .

Kuschel, K. &. (2016). Women start-ups in technology: Literature review and research agenda to improve participation. *International Journal of Entrepreneurship and Small Businesss. 27(2/3)*, 333.

Kuschel, K. (2014). Women start-ups in technology: Literature review and research agenda to improve participation. *International Journal of Entrepreneurship and Small Business. 27(2/3)*, 331-334.

Laguia, A., Watch, D., Garcia, C., & Moriano, J. (2021). *"Think entrepreneur - think male": the effect of reduced gender sterotype threat on women's entrepreneurial intention and opportuity motivation.* Department of Social and Organizational Psychology, Universidad Nacional de Educacion a Distancia (UNED).

Lene Foss, C. H. (2017). Women's entrepreneurship policy research: a 30-year review of the evidence. *Springer Nature* , 409-429.

Leonidas A. Campetakis, M. B. (2016). Sex differences in entrepreneurs' business growth intentions: an identity approach. *Journal of Innovation and Entrepreneurship (29)*.

Lewis, K. (2014). Public narratives of female entrepreneurship: Fairy tale or fact? . *Labour and Industry: a journal of the Social and Economic Relations Work, 24(4)*, 331-334.

Lewis, P. (2006). The quest for invisitibility: female entrepreneurs and the masculine norm of entrepreneurship . *Gender, Work and Organization, 13(5)*, 453-469.

Littunen, H. (2000). Entrepreneurship and the characteristics of the entrepreneurial personality . *International Journal of Entrepreneurial Behavious & Research (6)*, 295-309.

Lundvall, B. A. (2010). National systems of innovation: Toward a Theory of Innovation and Interactive Learning . *Anthem Press* .

Marlow, S. &. (2018). Annual review article: Is it time to rethink the gender agenda in entrepreneurship research:. *Internatinoal Small Business Journal: Researching Entrepreneurship, 36(1)*, 3-22.

Marlow, S., & Patton, D. (2005). All Credit to Men? Entrepreneurship, Finance, and Gender . *Entrepreneurship Theory and Practice 29(5)*, 717-735.

Marlowe, S., & Swail, J. (2013). Gender, risk and finance: why can't a woman be more like a man? *Entrepreneurship and Regional Development*, 80-92.

Mason, C. &. (2014). Entrepreneurship ecosystem and growth-oriented enterprises. . *OECD Leed Programme*.

Masters, R., & Meier, R. (1988). *Journal of Small Business Management 26(31)*.

Masuo, D. e. (2012). Factors associated with business and family success: A comparison of singel manager and dual manager family business households. *Journal of Family and Economics Value Issues, 22(1)*.

McCormack, J. (2003). How much are you worth John? About Gender and Entrepreneurship. *Bayl. Bus. Rev. (21)*, 22-29.

ME, E. K. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50(1)*, 25-32.

Merriam, S. (2009). *Qualitative Research: A guide to Design and Implementation.* Hoboken, New Jersey : Jossey-Bass.

Miller C.C., W. N. (2013). Persepctive-the myths of firm performance. *Organization Science , 24(3)*, 948-964.

Miraj, M., Chuntian, L., Ridwana, S. M., Bonsu-Osei, R., & Rehman, R. (2021). How Information-Seeking Behavior, Essential Technologies, and Resilience Enhance the Academic Performance of Students. *Frontiers in Psychology* .

Mirchandani, K. (1999). Feminist insight on gendered work: New directions in research on women and entrepreneurship. . *Gender, Work, and Organization, 6(4)*, 224-235.

Modarresi, M. (2016). *Women's entrepreneurship in Iran: How are women owning and managing home-based businesses motivated to grow:, "International Journal of Gender and Entrepreneurship.* International Journal of Gender and Entrepreneurship .

Moreira, P., Mullen, A., & Moreira, C. M. (2021). *Atlantic Canadian Startup Data Report .* Halifax: Entrevestor.

Morris, M. H., Miyasaki, N. N., Watters, C. E., & Coombes, S. M. (2006). The dilemma of growth: Understanding venture size choices of women entrepreneurs. *Journal of small business management, 44(2)*, 221-244.

Mwobobia, F. (2012). *International journal of business administration 3(2)*.

Namrata Gupta, A. M. (2017). Investigating entrepreneurial success factors of women-owned SMEs in UAE. *Faculty of Business, University of Wollongon* , 228.

OECD Innovation Strategy . (n.d.). Retrieved from OECD Better Policies for Better Lives: https://www.oecd.org/site/innovationstrategy/defininginnovation.htm

OECD/Eurostat. (2018). *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation,.* Paris/Eurostat: The measurement of Scientific. Technological and Innovation Activities, OECD.

Ogane, Y. (2021). Who is a good advisor for entrepreneurs? *Applied Economics 53(1)*, 1-34.

Ogbor, J. O. (1980). The Case for Qualitative Research . *The Academy of Management Review 5(4)*, 491-500.

One Nova Scotia Coalition. (2014). Retrieved from Now or never: An urgent call to action for Nova Scotians : https://www.onens.ca/about-onens/what-weve-done

Ozkazanc, P. B. (2018). "Networking towards (in) equality: Women entrepreneurs in technology.". *Gender, Work & Organization, 25(4)*, 379-400.

P.G. Greene, M. H. (2003). Women Entrepreneurs: Moving Front and Centre: An Overview of Research and Theory. *Coleman White Paper Series.*

Paige R.C., L. M. (2002). *Craft Retailers' criteria for success and associated business strategies.* Economic Sciences Series, 40(4).

Moreira P, A. m. (2020, 08 11). *Entrevestor Report.* Halifax: Entrevestor . Retrieved from Startup Ecosystem.

Phillips, D. (2006). Organizational genealogies and the presistence of gender inequilty:The case of Silicon Valley law firms. *Adm. SCI. Q. 50*, 723-753.

Prajawati, M. I., Wahjoedi, W., Wahyono, H., & Sunaryanto, S. (2020). Definition of Success According to Women Netrepreneur in Malang Indonesia . *Journal of Asian Finance, Economics and Business Vol 7 (9)*, 747-753.

Quintao, C., & Andrade, P. (2020). How to Improve the Valididty and Reliability of a Case Study Approach. *Journal of Interdisciplinary Studies in Education*, 264-275.

Roos, A. (2019). Embeddedness in context: understanding gender in a female entrepreneurship entwork . *Entrepreneurship and Regional Development, 2019, 31(3-4)*, 199.

Ross, A. (2019). Embedness in context: Understanding gender in a female entrepreneurship network. *Entrepreneurship and Regional Development 31:3-4*, 279-272.

Ruiz-Palomo, D., Fernandez-Gamez, M. A., & Leon-Gomez, A. (2022). Analyzing the Effect of Financial Constraings on Technological and Management Innovation in SMEs: A Gender Perspective. *Sage*, 1-13.

S. Coleman, A. R. (2009). A comparison of new firm financing by gender: evidence from the Kauffman firm survey. *Small Business Economics, 33*, 397-411.

S., S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. . *Small Business Economics, 33(2)*, 141-149.

Saliby, E. (1990). Descriptive Sampling: A Better Approach to Monte Carlo Simulation. *J.Opl Res. Soc. Vol. 41 (12)* , 1133-1142.

Sandford, A. R. (2015). Finding courage and confirmation: resisting imposter feelings through relationships with mentors, romantic partners and other women in leadership. . *Advanbcing Women in Leadership Vol. 35 No. 1* , 31-41.

Schot, J., & Steinmueller, W. (2016). Framing Innovation Policy for Transformative Change: Innovation Policy 3.0. *Science Policy Research Unit (SPRU), University of Sussex, Brighton*.

Shelton, L. (2008). Female entrepreneurs, work-family confilict, and venture preformance: new insights into the work-family interface. *Journal of Small Business Management Vol. 44 No. 2.*, 120-136.

Siivonen, P. T., Komulainen, K., Kasanen, K., & Kupiainen, P. (2021). Aged and gendered master narratives on entrepreneurship in Finnish higher education. *School of Educational Sciences and Psycology, University of Eastern Findland*, 26-44.

Striebing, C. K. (2019). "Pragmantic ex-ante evaluation using an innovative conceptual framework: The case of a high-tech entrepreneurship program for women.". *Evaluation and Program Planning* , 77.

Sulayman, M. M. (2014). Towards a theoretical framework of SPI success factors for small and medium web companies . *Inf. Softw. Technol., 56*, 807-820.

Sullivan-Hasson, E. (2021, March 8). *TrustRadius 2021 Women in Tech Report .* Retrieved from Trust Radius: 2021

Black S., L. F. (2022). *Parallel Paths, Unique Challenges.* The Conference Board of Canada.

Swati, P. (2018). *Constraints faced by women entrepreneurs in developing countries: review and ranking.* Denton: Deparment of Marketing and Logistics, University of North Texas.

Sweezy, P. M. (1943). Professor Schumpeter's Theory of Innovation. *The Review of Economics and Statistics, 25(1)*, 93-96.

T. Baker, H. A. (1997). *Entrepreneurship and Regional Development*, 9,221.

Tang, L. S. (2009). Venture entrepreneurship, innovation entrepreneurship and economic growth. . *Journal of Development Entrepreneurship, 3*, 161-171.

Taylor, M. (2021). *Canada women entrepreneurs: towards a diverse, inclusive and innovative ecosystem (Special issue).* Ontario: Canadian Diversity. Retrieved from Women Entrepreneurship Knowledge Hub.

Taylor, M. (2021). *Canada women entrepreneurs: towards a diverse, inclusive and innovative ecosystem (special issue).* Ontario: Canadian DIversity. Retrieved from Women Entrepreneurship Knowledge Hub.

Taylor, M. (2021). *Canadian Women Entrepreneurs: Towards a diverse, inclusive and innovative ecosystem (Special issue)*. Retrieved from WEKH: https://wekh.ca/research/canadian-women-entrepreneurs-towards-a-diverse-inclusive-and-innovative-ecosystem/

Thebaud, S. (2015). Business as plan B Instituion foundations of gender inequality in entrepreneurship across 24 industrialized countries . *Adm. Sci. Q., 60* , 671-711.

Times, T. N. (2017, August 3). *The New York Times.* Retrieved from "Push for gender equlity in tech? Some men say it's goine to far': https://www.nytimes.com/2017/09/03/technology/silicon-valley-men-backlash-gender-scandals.html

Lopes T., B. T. (2006). *Dancing on live Embers: Challenging Racism in Organizations.* Between the Lines.

United Way Social Purpose Institute. (2021). Retrieved from United Way of British Columbia : https://socialpurpose.ca/social-purpose/#:~:text=Its%20social%20purpose%20is%20a%20shared%20intent%20by,benefits%20by%20the%20very%20act%20of%20conducting%20business.

Urabe, K. (1988). Innovation and Management: International Comparison.

Van de Ven, A. H. (2004). Event- and outcome-driven explanatinos of entrepreneurship. *Journal of Business Venturing, 19(3)*, 343-358.

Vu, V. &. (2021, March 18). *Scale the Gap: Exploring gender ownership and growth experiences for Canadian firms. .* Retrieved from Women Entrpreneurship Knowledge Hub: https://wekh.ca/wp-content/uploads/2021/03/scale-the-gap.pdf

Wang, J. &. (2016). Women leaders in China: The Harmony approach. *Journal of Business Ethics, 88(3)* , 433-451.

Waverly Din, F. E. (2013). From bench to board: gender differences in univesity scientists participation in corporate scientific advisory boards. *Acad. Manag. J. 56(5)*, 14431464.

WBE Canada. (2018, 10 27). Retrieved from Government of Canada Launches First Ever Women Entrepreneurship Strategy: https://wbecanada.ca/business/canada-government-women-entrepreneurship-strategy-2018/#:~:text=October%2027%2C%202018%20As%20part%20of%20a%20%242-billion,Canada%20has%20launched%20the%20Women%20Entrepreneurship%20Strategy%20%28WES%29.

Welsch, L. K. (1993). *Journal of Business Venturing (16)*, 8, 151.

Women Entrepreneurship Knowledge Hub . (2018, 12 04). Retrieved from Government of Canada: https://ised-isde.canada.ca/site/women-entrepreneurship-knowledge-hub/en

Women in Venture Report 2018. (2018). Retrieved from Female Funders.

Xuemie, X. Y. (2021). Doing Well and Doing Goo: How Responsible Entrepreneurship Shapes Female Entrepreneurial Success. *Journal of Businesss Ethics (178)*, 803-828.

Y. Cha, K. W. (2014). Overwork and the slow convergence in the gender gap in wages. *Am. Sociol. Rev. 79* , 457-484.

Yin, R. K. (2003). *Case Study Research.* California: Sage Publications Inc.

Yousuf, D. A., & Smith, L. H. (2012). Female Entrepreneurship in Saudi Arabia: opportunities and challenges . *International Journal of Gender and Entrepreneurship, Vol. 4 No. 3*, 216-235.

Zainddin, A., Ahmad, J., Puteh, F., Chandran , S., Abu, H., & Ismail, T. (2017). The 21st Century Among Women Entrepreneurs: Revisting the Literature. *Advanced Science Letters, 23(8)*, 7845-7848.

Zainuddin, A., Puteh, F., Chandran, S. D., Hassim, A. A., Ahmad, J., & Ismail, T. N. (2017). The 21st Century Challenges Among Women Entrepreneurs: Revisiting the Literature. *American Scientific Publishers, Vol 23*, 7845-7848.

Zimmermand, D., & West, C. (1987). Doing Gender. *Gender and Society 1(2)*, 125-151.

Appendices

Appendix A

High growth female entrepreneurs and founder pipeline

Advancing Women in Technology Pipeline									
Founder	**Gender**	**Stage of Lifecycle**	**Ecosystem Engagement**	**Primary Sector**	**Secondary Sector**	**Region**	**Technology Enabled**	**High Growth**	**Interviewed**
A	Female	Scale	Yes	ICT		Central	Yes	Yes	Yes
B	Female	Scale	Yes	Services	Multi-Sector	Central	Yes	Yes	No
C	Female	Commercialization	Yes			Central	Yes	Yes	No
D	Female	Commercializaton	Yes	Agriculture, Fisheries		Central	Yes	Yes	Yes
E	Female	Commercialization	Yes	Food Insecurtiy	ICT	Nothern	Yes	Yes	Yes
F	Female	Scale	Yes	ICT	Health & Life Sciences	Central	Yes	Yes	No
G	Female	Scale	Yes	Infrastructure		Central	Yes	Yes	Yes
H	Female	Acquired	Yes	ICT		Central	Yes	Yes	No
I	Female	Scale	Yes	Services		Central	Yes	Yes	Yes
J	Female	Scale	Yes	ICT	Retail Digitization	Central	Yes	Yes	Yes
K	Female	Scale	Yes	ICT		Central	Yes	Yes	No
L	Female	Commercialization/Scale	Yes	ICT		Central	Yes	Yes	Yes
M	Female	Traction	Yes	Agriculture	ICT	Central	Yes	Yes	Yes
N	Female	Scale	Yes	ICT		Central	Yes	Yes	No
O	Female	Scale	Yes	ICT		Central	Yes	Yes	No
P	Female	Traction	Yes	ICT		Central	Yes	Yes	No
Q	Female	Commercialization	Yes	Health and Life Sciences	Manufacturing	Southern	Yes	Yes	No
R	Female	Scale	Yes	ICT		Central	Yes	Yes	Yes
S	Female	Scale	Yes	Pharma, Biotech		Central	Yes	Yes	No
T	Female	Traction	Yes	ICT, Life Sciences		Central	Yes	Yes	No
U	Female	Scale	Yes	Health and Life Sciences		Central	Yes	Yes	Yes
V	Female	Commercialization	Yes	Clean Tech	Natural Resources	Central	Yes	Yes	Yes
W	Female	Scale	Yes	ICT, Web3		Central	Yes	Yes	No
X	Female	Commercialization	Yes	Cleantech	Natural Resources	Central	Yes	Yes	Yes
Y	Female	Scale	Yes	ICT		Central	Yes	No	No
Z	Female	Scale	Yes	Pharma, Biotech		Central	Yes	Yes	Yes
A1	Female	Commercialization	Yes	Services		Central	Yes	No	No
A2	Female	Commercialization	Yes	Health and Life Sciences	Manufacturing	Central	Yes	Yes	Yes
A3	Female	Commercialization	Yes	Health and Life Sciences		Western	Yes	No	No
A4	Female	Commercialization	Yes	Health and Life Sciences		Northern	Yes	Yes	Yes
A5	Female	Traction	Yes	Circular Economy	Health and Life Sciences	Central	Yes	Yes	Yes
A6	Female	Commercialization	Yes	Natural Resources	Clean Tech	Central	Yes	Yes	Yes
A7	Female	Scale	Yes	Health and Life Sciences	Manufacturing	Central	Yes	No	No
A8	Female	Commercialization	Yes	Cleantech		Central	Yes	Yes	Yes
A9	Female	Traction	Yes	ICT		Southern	Yes	Yes	Yes
A10	Female	Commercialization	Yes	Health and Life Sciences		Central	Yes	Yes	No
A11	Female	Scale	Yes	Health and Life Sciences		Northern	Yes	Yes	Yes
A12	Female	Scale	Yes	Clean Tech	Agriculture, Fish, Food	Central	Yes	Yes	Yes
A13	Female	Concept/Create	Yes	Health and Life Sciences		Central	Yes	Yes	Yes
A14	Female	Scale	Yes	Agriculture, Fisheries		Central	Yes	Yes	Yes
A15	Female	Commercialization	Yes	ICT		Northern	Yes	Yes	Yes
A16	Female	Commercialization	Yes	Cleantech		Central	Yes	Yes	No
A17	Female	Traction	Yes	Cleantech		Central	Yes	Yes	No
A18	Female	Scale	Yes	Pharma, Biotech		Central	Yes	Yes	No
A19	Female	Scale	Yes	ICT		Central	Yes	Yes	No
A20	Female	Commercialization	Yes	ICT	Health and Life Sciences	Northern	Yes	Yes	Yes
A21	Female	Scale	Yes	ICT		Central	Yes	Yes	No
A22	Female	Scale	Yes	Health and Life Sciences		Central	Yes	Yes	No
A23	Female	Traction	Yes	Health and Life Sciences		Central	Yes	Yes	No
A24	Female	Commercialization	Yes	Cleantech		Central	Yes	Yes	No
A25	Female	Commercialization	Yes	Manufacturing	Clean Tech	Central	Yes	Yes	No
A26	Female	Traction	Yes	ICT	Services	Northern	Yes	Yes	Yes
A27	Female	Traction	Yes	Health and Life Sciences		Central	Yes	Yes	Yes
A28	Female	Scale	Yes	Health and Life Sciences		Central	Yes	Yes	Yes
A29	Female	Traction	Yes	Health and Life Sciences		Central	Yes	Yes	Yes
A30	Female	Scale	Yes	Health and Life Sciences		Central	Yes	Yes	No
A31	Female	Scale	Yes	Manufacturing		Nothern	Yes	Yes	Yes
A32	Female	Commercialization	Yes	Health and Life Sciences		Northern	Yes	Yes	No

Appendix B

Interview Question Sample

1. Have you participated in startup ecosystem programs or events? How much did you feel you "belonged" on a scale of 1-10. Why? (Ensure shared understanding of the term 'ecosystem')
2. Entrevestor 2020 Startup Data Report says 14% of Atlantic Canada start-ups are female-led and they raised just 3% of equity funding. What's your reaction to this data? Why?
3. What "start up ecosystem" support have you found most meaningful? Why? What tangible difference did it make in your business?
4. What start up ecosystem support have you engaged in that WASN'T useful? Why?
5. What are the 3 biggest barriers have you PERSONALLY faced or observed in starting and growing your company? Be SPECIFIC. Do you have ideas of how to eliminate/address these barriers? Eg, change the business, delay launch, avoid certain programs/events, etc.
6. What advice would you give funders about how to better support women entrepreneurs? Have you heard of programs/initiatives that are working elsewhere?
7. Let's make this ALL ABOUT YOU. Think about where you want to be in 12 months. What support/access/resources do you WISH YOU HAD to help you get there?
8. Flash forward 3 years. What would be different for YOU? What would be different for female founders? What would be different for the province?

9. What defines success for you as a female founder and how does that compare to how the ecosystem defines success?
10. What sector or industry do you work in?
11. How do you self-identify Gender?
12. Growth Stage of Company
13. This questionnaire seeks to gather information on:
14. Firm's current stage of growth;
15. Firm's current, past and future applications for funding and mentorship services;
16. Firms success metrics collected (past, current, future);
17. Firm's acquisition of support from Business Incubators and Accelerators, Federal and Provincial funds.
18. Do you have a co-founder?
19. How long have they been working in the industry?
20. Did you have significant investment through provincial and federal program grants in the last:
21. Would you classify your Startup as a purpose driven organization?
22. What characteristics do you use when defining success measurement for your Startup? (check-all)

• Stage of Raise
• Company Valuation
• Education level of team

• Re-occuring Revenue
• Social Governance
• Corporate Culture
• Personal Connections
• Acceptance to a business incubator and accelerator program
• Financial status
• Offering employment
• Revenue growth
• Proof of concept
• Social and community impact
• Work/life balance
• Corporate social responsibility
• Other

23. What is most surprising to you about pre-determined Key Performance Indicators and success metrics by:
24. Venture Capital Groups
25. Federal Government Programming
26. Business Incubators and Accelerators

27. Does government-programming pre-definition of success metrics align with your personal definition of Startup success?
28. If you are in need of mentor or funding support, please name which of the Atlantic and National business incubator and accelerator supports have you turned to?
29. For funding application program advice and mentorship, whom do you turn to?

Appendix C

Project

Gender Differences in the Determinants of Success for Technology Founders

Saint Mary's University

SMU REB # 22-066

LETTER OF INVITATION

Dear [ ],

I am conducting a research project that focuses on the analysis of success barriers by female founders operating in the entrepreneurship and technology innovation sector. The objective of this research is to study the gender differences in success determinants to inform the federally funded Women's Entrepreneurship Strategy (WES).

I am looking for a third-party consultant who will be tasked with interviewing female founders on behalf of this research project. I am interested in working with you.

Please let me know of your availability to discuss this opportunity, and if you have any questions in advance.

Thank you.

--

Principal investigator

Jessi Gillis, Saint Mary's University, Masters of Technology Innovation and Entrepreneurship.