

EXPLORING EQUITY CROWDFUNDING POTENTIAL IN NEWFOUNDLAND AND LABRADOR

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Abstract

The study adopted a place-based approach to evaluate the potential of Newfoundland and Labrador (NL) founders in terms of human and social capital, innovation, and active knowledge sharing to attract investors through Equity Crowdfunding (ECF). A systematic literature review was conducted to understand the relevant factors for ECF success, and primary data was gathered through a survey of small tech-based enterprises to understand whether of NL founders and their companies possessed these ECF success factors. Additionally, observations of founders' and companies' social media and websites provided further data. The findings highlight the founders' strengths and areas for improvement, offering insights into their readiness for ECF success. Additionally, the study suggested initiatives that the policymakers in NL might consider to make ECF a feasible fundraising platform for NL founders. By examining regions that differ culturally and economically from large urban areas, the study contributes valuable perspectives to the ECF literature, which predominantly focuses on mainstream regions and platforms. Given the emerging role of ECF in Canada as an alternative fundraising method, the study's findings may hold significant implications for policymakers and other relevant stakeholders.

Keywords: Equity Crowdfunding (ECF), Human capital, Social capital, Innovation, Active knowledge sharing, Newfoundland and Labrador (NL), Technology Industry

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INTRODUCTION

Equity crowdfunding (ECF) is an innovative form of financing that allows entrepreneurs to raise funds by offering equity in their business to a large number of investors through online platforms (Estrin et al., 2022; Feola et al., 2021; Moedl, 2021; Walthoff-Borm, Schwienbacher, et al., 2018). The platform enables entrepreneurs to showcase their companies and share investment documents (The detailed ECF process can be found in Appendix 1). The crowd, comprising platform members, can assess the investment opportunity and decide whether to invest based on the terms outlined in the documents (Pietro et al., 2021; Schwienbacher, 2019). Small tech-based firms are the major beneficiaries of ECF (Cecere et al., 2017; Nevin et al., 2018). Small firms often face challenges accessing traditional funding, especially when they lack an established track record (Lee, 2019). In contrast, ECF presents a notable advantage with its less stringent listing requirements and the absence of underwriters for managing security offerings, resulting in lower financing costs (Borin & Fantini, 2023; Wasti et al., 2024). Honjo & Kurihara (2023) argue that small firms particularly those in the high-tech sector, frequently encounter challenges due to their highly uncertain prospects and information asymmetry issues. ECF can reduce this early-stage funding gap. Elia et al. (2018) and Grüner & Siemroth (2019) studied three ECF campaigns in two studies and found that ECF supports launching innovative companies. However, like any investment avenue, it carries inherent risks and uncertainties that might make investors reluctant to invest in ECF (Gallucci et al., 2023; Hanif et al., 2023; Olsson, 2021). Therefore, it is crucial for entrepreneurs to understand the factors that investors evaluate before investing. Gaining this insight can help entrepreneurs assess their potential to secure funding through ECF and identify areas that may require further improvement.

Realizing the importance of ECF, many countries have implemented ECF policies to facilitate fundraising for entrepreneurs (Du et al., 2022; Garcia-Teruel, 2019; Mamonov & Malaga, 2018). The Canadian government is proactively promoting ECF to bolster its entrepreneurial ecosystem (Canadian Securities Administrators, 2021). To realize this objective, they have enacted measures designed to streamline access for entrepreneurs seeking funding via ECF platforms. The government of Canada has exempted prospectus requirements for the distribution of eligible securities through online funding portals, elevated investment limits for ECF, and raised the cap on proceeds that issuers can raise over a 12-month timeframe (Canadian Securities Administrators, 2021).

While legislation might allow entrepreneurs access to ECF platforms and increase the possibility of raising more funds from this channel, it does not guarantee successful uptake and participation by founders and/or investors. ECF literature defined success based on two criteria. First, the amount invested in a new venture during the ECF campaign is considered (Armour & Enriques, 2018; Ralcheva & Roosenboom, 2020). In this context, success is determined by whether the goal is achieved, specifically if the raised amount meets or exceeds the fundraising target (Borin & Fantini, 2023; Honjo & Kurihara, 2023; Nitani & Riding, 2017). Second, the number of investors who participated in the campaign is important (Le Pendeven & Schwienbacher, 2023; Li et al., 2023; Nose & Hosomi, 2023).

Given the significance of investors' willingness to participate in ECF campaigns, numerous studies have been conducted to pinpoint the factors typically considered by investors before making investments (Borchers & Dunham, 2022; Panitkulpong et al., 2023; Zhang et al., 2023). Scholars have recommended that founders focus on enhancing certain aspects (e.g., human, social, and intellectual capital) to generate enthusiasm among investors to support their firms (An & Kim,

2019; Battaglia et al., 2022; Kleinert et al., 2022). Therefore, although recent Canadian legislation has simplified and encouraged access to ECF, making it easier for entrepreneurs to raise funds, the entrepreneurs' expertise in various investor decision-making factors will be the key to achieving their fundraising goals.

The study aims to assess the readiness of Newfoundland and Labrador (NL) entrepreneurs (the easternmost province of Canada) to leverage the opportunities presented by recent legislative changes. Three major limitations of ECF literature were observed. Most of the literature is based on Europe and the USA, where ECF is relatively well-established, and very few studies have focused on other countries. Mochkabadi & Volkmann (2020), in their systematic literature review, made the same observation. This narrow focus limits understanding of how ECF operates in other parts of the world where the ecosystem might operate under different regulatory and economic conditions (Du et al., 2022; Ma et al., 2017; Mamonov & Malaga, 2018, 2019). Second, these studies are mainly based on some large, city-based popular platforms (e.g., Crowdcube, Kiskstarter, Indiegogo) which attract both national and international entrepreneurs and investors (Hornuf et al., 2018; Mamonov & Malaga, 2019; Martínez-Gómez et al., 2020; Valenza et al., 2022). Thus, the companies in remote areas and their possibility of success in ECF have gotten very little attention in ECF literature. Third, most of the studies focused on the country level or continent level, and no study was found that focused on a specific region within a country. Differences in ethnic identity, historical context, and geographical features can lead to substantial cultural variations within a single country (Kaasa et al., 2014). Therefore, adopting a place-based approach has been advised to address the economic, social, political, and institutional differences to optimize both local and overall economic development potential (Barca et al., 2011; Walsh & Winsor, 2019).

The purpose of our study is to partially address these gaps. The study aims to investigate the potential of ECF in NL. Considering the importance of a place-based study, the research focused on NL, the easternmost province of Canada. Studies have observed differences among different provinces of Canada in terms of cultural, social, and material aspects (Spigel, 2017; Walsh & Winsor, 2019). Hence, instead of a holistic approach, a place-based approach might enable the stakeholders to understand the potential of ECF for the NL entrepreneurial ecosystem. Inadequate financing is a major issue in the NL entrepreneurial ecosystem (Graham & Pottie-Sherman, 2021; Oldford et al., 2024; Walsh & Winsor, 2019). The provincial government of NL has launched a strategic initiative aimed at reducing reliance on government funding, largely sourced from oil revenue, to support entrepreneurs (Palladini, 2015). Therefore, ECF could emerge as a viable alternative for entrepreneurs seeking capital. Hence, the study aims to investigate the extent to which the NL entrepreneurial entrepreneurs and firms are ready to capitalize on the potential of ECF and identify issues that different stakeholders can consider to enhance the potential of ECF. The focus of the study is on small technology-based firms in NL, as ECF is most popular among technology-based, high-growth companies. Moreover, after the oil industry, the technology industry is the major sector in NL (Carter, 2022).

The paper is organized as follows. After this introduction, the next section provides a brief overview of the NL entrepreneurial ecosystem and the financial challenges faced by entrepreneurs, particularly tech-based firms. This section also explores how ECF can play a pivotal role in overcoming these challenges and achieving the economic goals of the provincial government. The following section presents a systematic literature review conducted using the Scopus database to identify the critical factors influencing the success of ECF campaigns. The analysis highlights that strong human and social capital, innovative potential, and proactive knowledge sharing with

stakeholders are crucial for achieving success in ECF initiatives. These elements are key contributors to the overall success of ECF endeavors. Based on the findings of the literature review, the methodology section discusses the investigation conducted to assess how well entrepreneurs in NL perform in these critical areas to determine their potential for successfully raising funds through ECF. A survey of entrepreneurs in NL was conducted to evaluate the proficiency of companies and founders in human skills, social skills, innovation, and active information sharing. Additionally, the founders' and companies' websites, Facebook, and LinkedIn pages were reviewed to assess their proficiency in these areas.

Finally, the study aims to gauge the level of knowledge NL founders have about ECF. ECF is an innovative method of raising funds through online platforms, inviting investors to participate (Hsueh et al., 2017; Lee, 2019). Hence, it is not surprising that traditional entrepreneurs and investors might not understand ECF adequately. Seventy percent of the European crowdfunding platforms find insufficient public knowledge about crowdfunding (Shneor et al., 2024). Therefore, understanding the NL founders' knowledge about ECF could enable policymakers to design educational programs.

The study indicates that NL entrepreneurs demonstrate proficiency in certain aspects of human capital, social capital, innovation, and active knowledge sharing. However, there are areas where additional improvement could increase the likelihood of success in ECF. Furthermore, the results indicate a significant deficiency among respondents regarding the understanding of ECF. The findings might have important implications for researchers and policymakers. To the best of current knowledge, this is the first study that is based on Canada since the majority of the ECF studies are based on popular ECF platforms in the USA and Europe (Du et al., 2022; Ma et al., 2017; Mamonov & Malaga, 2018, 2019). This is the first study to focus on a specific region (NL)

that, despite being behind larger provinces in many metrics used to measure economic development, shows potential for growth and prosperity through the technology sector (Carter, 2022).

THE STUDY SITE AND NL TECHNOLOGY INDUSTRY

BACKGROUND

The study aims to understand how well the NL entrepreneurs of tech firms are prepared to take advantage of ECF. As mentioned below, despite being a key player in NL's non-extractive industries, tech firms often face challenges in raising adequate funds for innovation and expansion. Hence, ECF can play a pivotal role in supporting the NL tech firms and can contribute to achieving the economic goals of the provincial government.

NL, Canada's easternmost province covering 405,212 square kilometers, has a population of 541,391 as of October 1, 2024 (Government of Newfoundland and Labrador, 2024b). The province's economy is heavily dependent on industries like oil extraction and fisheries, which are prone to economic ups and downs due to changes in oil prices (Carter, 2022; Graham & Pottie-Sherman, 2021). However, over-reliance on these two sectors also posed significant financial risks to the province, as evidenced by its near bankruptcy in 2017, mitigated only by a substantial increase in oil prices (Walsh & Winsor, 2019). These massive consequences have encouraged entrepreneurship and diversification of the economy (Graham & Pottie-Sherman, 2021; Spigel, 2016; Walsh & Winsor, 2019).

Since then, the provincial government has invested significantly in prompting start-ups, research and development, and innovation in NL companies (Carter, 2022; Walsh & Winsor, 2019). The provincial government is the main supporting actor in the entrepreneurial ecosystem; however, the capacity has waxed and waned and is currently weaker due to the volatility in the oil industry. The federal government is also a critical player in NL; however, over time, the federal government has had lower levels of spending in NL than in the other Atlantic provinces (Carter, 2022). Despite the government's support, inadequate finance has been frequently cited as one of the major challenges of the NL entrepreneurial ecosystem (Graham & Pottie-Sherman, 2021; Oldford et al., 2024; Walsh & Winsor, 2019). The lack of private investment and angel investors is another important barrier for entrepreneurs (Hall et al., 2014). Angel investors are important for early-stage capital to innovative companies for developing new products or processes, and the lack of local angel investors in NL is a significant barrier for firms (Pietro et al., 2021; Spigel, 2016; Troise & Tani, 2020; Walthoff-Borm, Vanacker, et al., 2018). Entrepreneurs of NL often face difficulty in dealing with the complex paperwork associated with government funding, and they often need to assign consultants to deal with that, increasing their expenditure (Hall et al., 2014).

The tech industry is a key player in NL's non-extractive industries. The major tech industries of NL are ocean technology, clean technology and environmental industries, aerospace and defense, information and communication technology, connectivity, and health and life science technology (Government of Newfoundland and Labrador, 2024b). The sector has a revenue of \$1.60 billion to the economy each year, larger than the revenue of fisheries, forestry, and tourism (Carter, 2022). One huge success story is Verafin, the world's largest financial crime management company, acquired by NASDAQ in 2020 for 2.75 billion, making it the largest financing ever for a Canadian software company (Carter, 2022). Despite the promising possibility of the tech sector,

entrepreneurs often face financial challenges (Spigel, 2016). Sometimes, they need to hire employees of specific skills from other provinces, and due to financial inadequacy, entrepreneurs outside the gas or oil industry often fail to attract them, as they can not offer them a six-figure salary. Additionally, the majority of the investors of NL have a traditional background, such as retail or real estate development, and do not have the experience necessary to evaluate the potential of technological innovation (Spigel, 2016). Hall et al. (2014) find that by innovation, investors of NL often consider invention and often ignore different types of improvement in terms of processes or products. Hence, it is recommended that alternative angel investors be found (Spigel, 2016). In that case, ECF can play an imperative role, as entrepreneurs can pitch their ideas to a wide range of investors. Additionally, ECF promotes feedback and knowledge, enabling entrepreneurs to transform their ideas into successful products or services (Pietro et al., 2021; Troise & Tani, 2020).

After the collapse of fisheries and turmoil in the oil industry, the government of the province was keen to promote innovation in the region, and in 2017, the government rolled out the innovation agenda where special focus is given to technology (Carter, 2022; Walsh & Winsor, 2019). ECF promotes innovation in two ways. First, the small investments of large crowds can enable young firms to raise capital for their innovative projects, thus contributing to the emergence of innovative solutions (Estrin et al., 2018; Mitreęa-Niestrój & Klimontowicz, 2020; Wald et al., 2019). Second, the feedback and knowledge sharing of “crowd networks” can help entrepreneurs in developing ideas and transform them into successful products and services (Pietro et al., 2021; Troise & Tani, 2020; Walthoff-Borm, Vanacker, et al., 2018).

ECF, as an alternative financing source, can reduce the long-standing funding issues of entrepreneurs. The literature suggests that despite the importance of the tech industry for the NL economy, tech entrepreneurs often face challenges in raising funds to develop new products or

processes (Graham & Pottie-Sherman, 2021; Oldford et al., 2024; Walsh & Winsor, 2019). ECF is well recognized for promoting tech sectors and innovations, and the literature suggests that tech-based firms are more successful in raising funds through ECF (Honjo & Kurihara, 2023; O'Reilly et al., 2023). Hence, tech firms will be investigated to understand the potential NL tech entrepreneurs in ECF.

LITERATURE REVIEW

The aim of this study is to assess how effectively entrepreneurs in NL manage key areas critical for successfully raising funds through ECF. To accomplish this, past research was reviewed to identify the factors that experts consider important for attracting investors. Based on these insights, the study assesses the proficiency of NL entrepreneurs in these areas.

A systematic literature review was conducted to examine past research and explore the factors that contribute to successful ECF fundraising. This approach offers a comprehensive and structured understanding of the existing body of knowledge in the field (Cai et al., 2021; Camilleri & Bresciani, 2022; Mochkabadi & Volkmann, 2020). For this purpose, the PRISMA method was followed, which includes four stages: search, screening, extraction, and synthesis of previous studies (Camilleri & Bresciani, 2022).

ECF is a relatively new topic in entrepreneurship research, so a search for "Equity Crowdfunding" was conducted in Scopus to collect a diverse set of studies. Two main criteria were applied: only journal and conference papers were included, while book chapters, books, notes, and editorials were excluded. Additionally, only English-language papers were considered, and those in other languages were not included.

The search yielded 358 papers, 303 journals, and 55 conference papers. For screening the journals, I focused on their relevance to the study's objectives. The objective is to explore the factors that influence investor decisions in ECF. As a result, attention was given to studies that examine the key factors that attract investors and enable entrepreneurs to successfully raise the desired funds through ECF platforms. Based on this objective, 233 studies were excluded, and the remaining 127 studies were considered for the study. Many studies discussed the implications of different legal frameworks and governance issues of ECF, which is outside the scope of our study. Out of the total, 12 studies come from conference papers, and 113 are from journals, spanning the years 2014 to 2024. Five journals that were considered highly relevant to the research were identified in the selected studies and included in the analysis. Consequently, a total of 130 studies were ultimately included in the analysis. Figure 1 presents the distribution of journals and conference papers over the years, and Table 1 presents the descriptive analysis of the selected papers.

< Insert Figure 1 from Appendix 2 here>

< Insert Table 1 from Appendix 2 here>

To synthesize the information, an inductive method was adopted to understand the central themes within each study. By "themes," scholars refer to the fundamental concepts and arguments derived from the findings of the studies (Mochkabadi & Volkmann, 2020). Studies in ECF literature investigated the individual and firm factors that can attract investors and enable firms to raise funds through ECF successfully. The most frequently addressed factors can be classified into four categories: human capital, social capital, innovation, and presentation of information. A summary of the factors for ECF success is provided in Table 2.

< Insert Table 2 from Appendix 2 here>

Out of 130 papers, 61 covered human capital issues, 69 covered social capital issues, 31 covered innovation, and 24 covered effective knowledge-sharing issues. Some papers covered more than one issue. For instance, Mamonov & Malaga (2019) have stressed the importance of human capital, innovation, and better presentation of information. Hence, this paper is counted for each of the themes.

Human Capital

Human capital is widely acknowledged as the means to be successful in raising funds for ECF (Hornuf & Schwienbacher, 2018a; Löher et al., 2018; D. Zhang et al., 2018). Human capital is a multidimensional construct associated with the proficiencies and skill sets inherent in the entrepreneurial team (Barbi & Mattioli, 2019; Mazzocchi & Lucarelli, 2023; Zunino et al., 2022). Entrepreneurs' experience (Lukkarinen et al., 2016; Ma et al., 2017); skills (Ahlers et al., 2015; Piva & Rossi-Lamastra, 2018); education (Wasti & Ahmed, 2023; Zhang et al., 2024); team size (Nose & Hosomi, 2023; Vu & Christian, 2023); and team diversity (Butticè & Vismara, 2022; Cicchiello et al., 2022) are the elements of human capital that have garnered substantial attention in different studies. There is a positive relationship between personal traits and entrepreneurial success, which often encourages investors to assess the characteristics of the top management of firms (D'Agostino et al., 2022).

Entrepreneurial Experience. In the entrepreneurial finance literature, studies have established that the entrepreneurial or start-up experience of founders is a crucial influence in acquiring external financing (Kleinert, 2024; Kleinert et al., 2022; Rostamkalaei & Freel, 2023). Establishing a start-up necessitates a diverse spectrum of skills and competencies, as founders are compelled to undertake multiple roles, encompassing responsibilities such as accounting, technical

expertise, salesmanship, and others (Piva & Rossi-Lamastra, 2018; Zhang et al., 2024). Hence, it is not surprising that investors perceive the founder's experience as the foremost criterion for the selection (Kleinert & Mochkabadi, 2022; Lim & Busenitz, 2020; Troise et al., 2022). In the initial venture development phase, successful commercialization is a significant hurdle. Early entrepreneurial tasks involve introducing a new product, establishing market demand, and addressing unforeseen challenges. Hence, the founders' prior industry and founding experience are crucial indicators of potential success in future commercialization efforts (Ko & McKelvie, 2018).

Empirical studies show a positive relationship between founders' experience and ECF success (Barbi & Mattioli, 2019; Di Pietro & Tenca, 2023; Shafi, 2021; Troise, Matricano, et al., 2020). Kleinert & Mochkabadi (2022) state that managerial experience encapsulates task-related attributes, enabling individuals to proficiently implement strategies and navigate the challenges inherent in the start-up environment. Kleinert & Mochkabadi (2022) find a positive relationship between management experience and ECF success. Troise et al. (2020) state that the knowledge acquired by founders in their previous industry and start-up experience are fundamentally important for developing and growing new companies. Dority et al. (2021) explored 3200 United States-based equity offerings and find that professional experience as an entrepreneur and work experience in the same industry are pivotal for ECF success.

Entrepreneurial Education. Scholars in different studies find that companies are more likely to succeed when entrepreneurs have received higher education (Ma et al., 2017; Buerger et al., 2018; Cicchiello et al., 2022). Acquiring formal education is a crucial element of human capital (An & Kim, 2019; Block et al., 2018; Nitani et al., 2019), as individuals with higher levels of education possess not only increased knowledge but also the essential skills required for the survival and success of ventures (Barbi & Mattioli, 2019). Founder's education level signal their

ability to develop specialized technology crucial for a venture's value. Additionally, educated individuals often lead faster-growing businesses, highlighting the correlation between education, productivity, and innovation in technology development and effective business management (Barbi & Mattioli, 2019; Ko & McKelvie, 2018). Battaglia et al. (2022) find that founders' education, a crucial component of their intellectual capital, positively impacts the success of equity crowdfunding campaigns based on their study of 191 campaigns. Other empirical studies investigating the relationships between founders' education and ECF success (Coakley et al., 2022; Johan & Zhang, 2022) have similar observations.

Industry-specific education and business or economics-based studies are often preferred for ECF Success (Cicchello et al., 2021; Piva & Rossi-Lamastra, 2018). Crowdfunding investors see entrepreneurs with education in economics and management as having the innate ability to identify and seize business opportunities, assess business viability and costs, develop effective plans, understand market dynamics and customer needs, and navigate competitive environments. They also believe that formal education in these fields enhances these abilities by providing essential tools, theories, and techniques (Piva & Rossi-Lamastra, 2018). Researchers find that entrepreneurs with business education and industry-related education are more likely to succeed in ECF (Piva & Rossi-Lamastra, 2018).

Entrepreneurial Team Size. To effectively implement plans, early-stage ventures need a versatile skill set encompassing areas like product development, marketing, operations, and financial management (Hornuf et al., 2018). Scholars argue that it is unlikely for any individual founder to possess all the skills required for the success of a venture (An & Kim, 2019; Hornuf et al., 2018). Hence, they emphasized larger team sizes for companies, allowing them to capitalize on opportunities by leveraging diverse team specializations, ensuring each member can focus on

specific roles without concurrently managing multiple responsibilities (Bui & Sprague, 2017; Mochkabadi & Volkmann, 2020; Piva & Rossi-Lamastra, 2018).

The findings of empirical studies show a positive relationship between team size and ECF success (Ahlers et al., 2015; Martínez-Gómez et al., 2020; Ralcheva & Roosenboom, 2020). Mamonov & Malaga (2019) investigated 337 ventures and find that single entrepreneurs are less likely to successfully raise funding in ECF than entrepreneurial teams comprised of two or more members. Likewise, Hornuf et al. (2018) discover that following a successful ECF campaign, an increase in the management team size enhances the firm's likelihood of securing subsequent funding.

Entrepreneurial Team Diversity. Diverse teams are vital for entrepreneurial ecosystems, as researchers find that companies equipped with diverse partners can benefit greatly from a range of contacts, knowledge, and skills crucial for capitalizing on opportunities. Prokop & Wang (2022) investigated 438 equity crowdfunding projects from 22 German equity crowdfunding platforms and find that female founders can signal a higher level of role congruity to crowd investors, and thereby improve the funding outcomes. Other scholars find that diversity in terms of education (D'Agostino et al., 2022); different nationalities (Butticè & Vismara, 2022; Maula & Lukkarinen, 2022); and age (Hornuf et al., 2018; Mamonov & Malaga, 2019) are positively related to ECF success. Maula & Lukkarinen. (2022) argue that investors from various countries prefer putting their money into businesses whose teams include people from their nationality. This is why companies benefit from promoting diversity globally and strategically showcasing their team members in their home countries.

Social Capital

Based on the social capital theory, it is argued that founders' social capital can play an imperative role in ECF's success (Dao et al., 2024; Li et al., 2023; Li et al., 2024). The social capital theory posits that building social networks can offer significant benefits, such as fostering trust among investors, increasing the potential for strategic alliances, and strengthening stakeholder relationships (Camilleri & Bresciani, 2022; Vismara, 2016). Scholars assert that social capital is important for three reasons: to foster trust (An & Kim, 2019; Meoli & Vismara, 2021), to develop skills and knowledge for innovation and progress (Rostamkalaei & Freel, 2023; Troise, Matricano, et al., 2020), and to raise capital for their start-ups (Li et al., 2023; Li et al., 2024; Panitkulpong et al., 2023).

The major challenges of ECF include heightened risks (Bouaïss et al., 2020; Ndou et al., 2022), increased susceptibility to fraud (Butticè & Vismara, 2022; Hanif et al., 2023), a higher proportion of nonprofessional investors (D'Agostino et al., 2022; Piva & Rossi-Lamastra, 2018), and inadequate information (Kleinert & Mochkabadi, 2022; Zhang et al., 2023). Hence, aside from financial returns, investors frequently tend to evaluate the trustworthiness of the founder's credibility, the project, and the information provided by the founders (Dehghani et al., 2023; Kleinert, 2024). Troise, Tani, et al. (2020) state that trust is helpful to mitigate concerns related to potential investment. Therefore, a trustworthy person is more likely to get support to an extent that would be unattainable in the absence of trust (Barbi et al., 2023; Liang et al., 2019; Troise, Tani, et al., 2020). Social relations and interactions can foster an atmosphere of trust, and the relationships developed through mutual understanding can minimize perceived uncertainty and positively influence investors' decisions (Cecere et al., 2017).

Scholars argue that there is a positive relationship between founders' social capital and investors' trust that can contribute to the success of ECF (Li et al., 2023; Li et al., 2024; Panitkulpong et al., 2023). Sabia et al. (2023) argue that social capital fosters interactions and engagement with brand communities, which positively influences the purchase intentions of the communities. Kang et al. (2016) argue that social interaction enhances the availability of project information, fostering trusting relationships that, in turn, have a positive impact on the decision to invest in ECF. In their empirical study, Kang et al. (2016) find that the relationship between social interaction and willingness to invest is mediated by relationship trust. Similarly, Cai et al. (2021), in their systematic review-based studies, find that social capital derives from social embeddedness and contributes to building trust, which in turn facilitates mutual understanding of the common goal.

Scholars have further classified social capital into internal and external social capital, discussing how these forms of capital can enable entrepreneurs to raise funds successfully through ECF. Internal social capital refers to the network and assets developed within the platform (Mazzocchi & Lucarelli, 2023; Vrontis et al., 2021); whereas the external network represents a network that is developed outside the crowdfunding platform (Cai et al., 2021; Groza et al., 2020; Skirnevskiy et al., 2017). There are three types of external social capital: personal networks (Li et al., 2023; Ma et al., 2017; Rostamkalaei & Freel, 2023), presence in social media (Lukkarinen et al., 2022; Prasobpiboon et al., 2021), and third-party endorsement (Mochkabadi et al., 2024). Nevin et al. (2017) find that maintaining an increased level of social media activity and fostering high engagement with the audience positively influences the overall success of a crowdfunding campaign. Additionally, the more friends in the social network, the bigger the chance of a project succeeding (Ferreira & Pereira, 2018). External endorsements come from being connected to

respected people and organizations. They give important support to new businesses, making them seem more legitimate (De Crescenzo et al., 2022; Mochkabadi et al., 2024).

Beyond fundraising, social capital can enhance entrepreneurs' knowledge, skills, and innovation capacity, contributing to their success in ECF (Cummings et al., 2020; Pietro et al., 2021). Social capital might allow entrepreneurs to come into contact with knowledgeable and experienced investors who can provide feedback and new ideas, thus fostering the innovation process (Eldridge et al., 2021; Troise et al., 2022). Moreover, individuals who have connections with entrepreneurs can play a pivotal role in promoting the product among their friends. This not only helps expand the market for firms but also enhances visibility and potential customer base through trusted networks (Nitani et al., 2019). Pietro et al. (2021) find that social networks and interactions help founders obtain feedback about their products, as well as develop skills and expertise. Other scholars agree that social media can enable founders to get feedback about their product (Troise & Tani, 2020; Walthoff-Borm, Vanacker, et al., 2018); enhance network ties (Butticè et al., 2020; Shen et al., 2020); and develop knowledge (Bui T.X. & Sprague R., 2017; Butticè et al., 2020).

Innovation

Innovation entails certain technical knowledge for doing things better than existing state of the art, which can contribute to productive manufacturing, greater financial performance, and a positive reputation among consumers (Mazzocchi & Lucarelli, 2023; Valenza et al., 2022; Wasiuzzaman et al., 2021). Scholars argue that innovation is imperative to raise funds from ECF's successfully (Battaglia et al., 2022; Du et al., 2022; Troise, Matricano, et al., 2020). Innovation is considered a signal that shows the venture's innovative capabilities (Battaglia et al., 2022; Troise

et al., 2022), and it can attract investors in different ways. First, the expectation for higher return from their investment, as innovation has the potential to shift market demand from existing to new products or services (Di Pietro et al., 2023; Le Pendeven & Schwienbacher, 2023). Second, innovation refers to the founders' due diligence since they continuously try to add value to their products and services (Le Pendeven & Schwienbacher, 2023). Third, innovative products provide novel experiences and arouse curiosity regarding the venture. This emotional desire might motivate individuals to support the venture and participate in the process (Wasiuzzaman et al., 2021). Fourth, innovation provides essential survival advantages, such as boosting a company's market influence and capacity to evade competition (Horvát et al., 2018). In their empirical study, Troise, Matricano, et al. (2020) investigated the implication of innovation on ECF success. They studied 72 successful projects in 7 Italian ECF platforms and found that innovation played a positive role in those successful projects. Similarly, Troise et al. (2022) studied 100 ECF firms and found a significant positive relationship between product innovation and funds raised.

Scholars often use the existence of patents of firms to signal the innovative capacity of small firms and undertake different empirical studies to understand the relationship between the patent and ECF success (Skirnevskiy et al., 2017; Troise et al., 2022). Companies with patents show how good they are at technology or developing new ideas (Troise et al., 2022). Additionally, small firms with patents are considered more credible as they signal quality to outsiders (Honjo & Kurihara, 2023). Research indicates that firms that have filed for patents are more likely to do well in equity crowdfunding than those that have not (Honjo & Kurihara, 2023). Patenting is important for success in ECF for three reasons. First, patents, as part of intellectual capital, signal information to investors about the characteristics of the firm and its innovation capability. Second, patents serve as protection against market rivals and showcase a founder's effort to develop a successful

business (Battaglia et al., 2022; Le Pendeven & Schwienbacher, 2023). This protection of ideas is crucial, as entrepreneurs frequently express concerns about their business concepts being exposed during investor pitches (Pietro et al., 2021). Third, patents are considered a costly and noticeable signal that might appear trustworthy to investors (Battaglia et al., 2022). Di Pietro et al. (2023) argue that costly signals, reflecting a company's past accomplishments, are more impactful than costless signals, which rely on promises of future success that may seem like empty talk to investors.

Active Knowledge Sharing

Researchers emphasize the importance of better communication strategies to highlight their human, social, and innovation capabilities (Lukkarinen et al., 2016; Mazzocchi & Lucarelli, 2023; Troise et al., 2022). They argue that to achieve success in financing, it is crucial to reduce information asymmetry between fundraisers and investors (Block et al., 2018; Löher, 2017). Information asymmetry exists when the entrepreneur knows the quality of the product or venture better than the investors, making investors unsure about the quality of the small firm (Ferreira & Pereira, 2018). Hence, entrepreneurs should prioritize conveying their missions, visions and how they are contributing for the society to potential investors to establish legitimacy and credibility for financing (Block et al., 2018; Dorfleitner et al., 2018). An effective communication strategy can prove instrumental in reaching a broader audience of potential investors (Ma et al., 2017), prompting their business, and updating investors about their products (Beaulieu et al., 2015).

Among various methods of knowledge sharing, keeping stakeholders informed is particularly important (Hornuf & Schwienbacher, 2018b; Kleinert & Volkmann, 2019). Entrepreneurs often use updates as a one-way flexible communication to share additional

information about the product, the company itself, or the ongoing events (De Crescenzo et al., 2022; Vismara, 2018). Researchers suggest that communication should be a continuous process and that it is important to update investors about the development of the projects. One of the major challenges of ECF is uncertainty about project success and concern about the project quality, and updates and information disclosure can reduce uncertainty about the projects, risk of adverse selection or moral hazards (Dao et al., 2024; De Crescenzo et al., 2022). Regular updates enable investors to grasp the company's values more effectively. Furthermore, these updates are readily accessible and visible, as stakeholders can review them on social media or the companies' websites (Block et al., 2018).

Additionally, through campaign updates, campaign creators can show positive attitudes and the skills and commitment required to overcome adversities (Hornuf & Schwenbacher, 2018a). Hence, scholars argue that updates are important for funding success (Buerger et al., 2018). The lack of early updates can reduce the chance of success of the campaign by 13% (Dorfleitner et al., 2018; Ferreira & Pereira, 2018). Specifically, providing updates on start-up developments, such as securing new funding sources and collaborations, enhances funding success during the fundraising period. Block et al. (2018) studied social media updates for content, frequency, and length. They find that regular updates have a positive impact on ECF participation. Additionally, longer descriptions in crowdfunding campaigns significantly improve campaign outcomes by providing more detailed information about the project, start-up, or product, thereby reducing information asymmetries between start-ups and potential investors. De Crescenzo et al. (2022) argue that crowd investors favor detailed project narratives; hence, extensive descriptions, ideally exceeding 500 words, might boost the chances of success. Finally, justifying expectations, explaining philosophies, and detailing the positive impacts of contributions are recognized as factors for

amplifying campaign success (De Crescenzo et al., 2022; Gallucci et al., 2023; Wasti & Ahmed, 2023).

In addition to ECF's success, other entrepreneurial literature find that active knowledge sharing promotes brand loyalty, organizational identity, and innovation. Knowledge and information enable founders to build a strong identity (Nevin et al., 2017; Zhao et al., 2022). By posting, commenting, sharing, and maintaining their profiles, entrepreneurs are actively shaping their identity—who they are and who they aspire to be in the eyes of others. Additionally, posting updates about ongoing projects, new products, or product sketches and seeking input and feedback from followers might improve product innovation and brand identity (Horst et al., 2020).

RESEARCH DESIGN AND METHODOLOGY

Data Source and Survey Procedure

This research is based in Newfoundland and Labrador, Canada, as the site of the empirical investigation. Recent research on NL finds inadequate funding and inadequate knowledge of traditional investors are major barriers to the growth of tech companies in NL (Brunelle & Spigel, 2017; Hall et al., 2014). Considering the promises of ECF to prompt innovation and technology (Cecere et al., 2017; Nevin et al., 2018), the tech industry of NL is the focus for this study.

Primary data has been collected in three ways. First, a request letter, along with the recruitment letter, was sent to TechNL to distribute a survey to its members. TechNL (www.technl.ca) is a non-profit organization dedicated to supporting technology and innovation-focused enterprises in Newfoundland for over 30 years. Second, the invitation to participate in the survey was sent to eighty companies that, based on observation, met the eligibility criteria. Third, an invitation to participate in the survey was posted on the author's personal LinkedIn page. The

survey and all methods of collection were approved by the Memorial University Research and Ethics Board (see Appendix 3).

The study utilized four key eligibility criteria for participants. Firstly, the firms needed to be based in Newfoundland and Labrador. Secondly, founders of technology-based and emerging companies were invited to participate. Thirdly, the focus was on small businesses, defined by (Statistics Canada, 2023) as businesses with 1 to 99 employees. This classification is significant because small businesses often benefit most from ECF, given their challenges in securing traditional funding (Blaseg et al., 2021; Feola et al., 2021; Kleinert et al., 2020; Walthoff-Borm, Schwienbacher, et al., 2018). Fourthly, the definition of founders in the context of ECF, provided by the Canadian Securities Administrators, was used. This definition states that founders are individuals who, either directly or indirectly, play a significant role in the establishment, organization, or major reorganization of the issuer's business and are actively engaged in its operation (Canadian Securities Administrators, 2021).

Founders meeting these criteria were invited to take part in the survey, but the initial responses were limited. To increase participation, outreach was extended by reviewing the member directories of both TechNL and Genesis (www.genesiscentre.ca). Genesis has been instrumental in supporting start-ups in NL for over 25 years. A total of 80 companies were identified as eligible based on the established criteria. Invitation letters were sent to the official email addresses of these specific firms.

Qualtrics software was used to create the survey. A copy of the consent letter and survey instrument can be found in Appendix 4. Participation in the survey was voluntary and anonymous. According to Qualtrics, completing this survey took approximately 10-12 minutes. The same invitation was posted on the LinkedIn page. The survey was conducted from March to June 2024.

Thirty-two responses were found (a forty percent response rate). After removing responses with excessive missing data, the final sample comprised 26 participants.

The websites, Facebook pages, and LinkedIn profiles of the 80 firms and their founders were reviewed for collecting secondary data. For two reasons, secondary data were collected. First, the number of primary responses was relatively low. Second, observation-based studies are often preferred over self-reported data due to lower risks of respondent misrepresentation on social media platforms (Banerji & Reimer, 2019). Eight firms were excluded due to unavailability of information or failure to meet the established criteria. Finally, data were collected from the websites of 72 of these firms. Out of these, 69 companies have LinkedIn pages. Additionally, 88 founders' LinkedIn pages were reviewed based on the availability of information. LinkedIn is like an online resume where researchers can find details about entrepreneurs' backgrounds, experience, education, and social networks (Banerji & Reimer, 2019). LinkedIn profiles of entrepreneurs have been considered in the study as scholars find that compared to traditional resumes, LinkedIn resumes are less deceptive in terms of prior work and responsibilities (Banerji & Reimer, 2019; Guillory & Hancock, 2012). Out of the 72 firms, 37 had Facebook pages. Entrepreneurs widely use Facebook to promote their companies and products (Constantinidis, 2011; Mohamad Nasir et al., 2022).

Primary Data Measurement Development:

The survey was designed to address the efficiency of NL entrepreneurs in terms of human and social capital, innovation, and active knowledge sharing. The details of different variables of human and social capital, innovation, and active knowledge sharing are mentioned below. A summary of the measurement variables discussed can be found in Table 3.

< Insert Table 3 from Appendix 2 here>

Human Capital. For human capital, entrepreneurs' education (Block et al., 2018; Nitani et al., 2019), experience (Lim & Busenitz, 2020), team size (Bui T.X. & Sprague R., 2017; Hornuf & Schwienbacher, 2018b), and team diversity (Cosma et al., 2021; Giudici et al., 2020) have been considered. With respect to experience, three types of information were considered: the age of the firms, the entrepreneurs' background, and how their experience aligns with their firms' nature of operations. Regarding founders' education, two aspects are considered: their highest level of education and how relevant it is to their firms. Regarding team size, the total number of members, including the founder, has been considered. For team diversity, three types of diversity were considered: gender diversity, experience diversity, and ethnic diversity.

This study's measurement criteria for human capital are predominantly derived from previous research with minor modifications (Ahlers et al., 2015; Vismara, 2016; Zhang et al., 2024). Participants provide information on their educational background by selecting various options, from the highest level of education (PhD) to the lowest (no formal education). They also responded to a 5-point scale to assess how relevant their educational qualifications are to the nature of their firms.

Regarding experience, participants select the option that best represents both their years of professional experience and the age of their firms. Similarly, a 5-point scale is employed to evaluate how their experience aligns with the nature of their firms. Additionally, participants report the percentage distribution of their team members in terms of ethnic, experiential, and gender diversity.

Social Capital. For social capital, entrepreneurs' engagement both in the community and on social media were captured (Prasobpiboon et al., 2021; Rostamkalaei & Freel, 2023). Additionally, the recognition received from the local community was taken into account, as research indicates that third-party endorsements play a key role in boosting investor confidence (De Crescenzo et al., 2022; Mochkabadi et al., 2024).

Participants used a 5-point scale (5=extremely connected, 1=not connected) to rate their overall level of connection. They also used this scale to rate their connection levels with stakeholders such as customers, friends and family, investors, suppliers, banks, industry associations, other entrepreneurs, and potential collaborators. Participants indicated how often they communicate with these stakeholders (5=once a week or more, 1= less than once a year). Participants were also asked if they had any community recognition.

Innovation. To assess the companies' innovative orientation, participants used dichotomous scales (1=yes, 0=no) to indicate their involvement over the past five years in various aspects: developing new products, diversifying products, expanding to new markets or geographic areas, improving existing products, adopting environmentally friendly practices, integrating new technologies, having a business plan, and filing trademarks/patents. This study's measurement criteria are predominantly derived from previous research with minor modifications (Ahlers et al., 2015; O'Cass & Weerawardena, 2009)

Knowledge Sharing. How entrepreneurs might potentially engage with investors have been analyzed by reviewing their social media activity, such as their posts and updates (Buerger et al., 2018; De Crescenzo et al., 2022; Mamonov & Malaga, 2019). Participants responded on a 5-point scale (5= regularly, 1= rarely) to indicate the extent they are engaged in different social media activities.

Understanding of ECF. Studies show that a majority of the entrepreneurs have an inadequate understanding of ECF (Ferreira & Pereira, 2018; Yensu et al., 2024). Hence, participants responded on a 10-point scale (where 0= not at all aware and 10= fully aware) to express their understanding of ECF.

Variable definition, coding of variables, and descriptive statistics of survey data are reported in Table 4.

< Insert Table 4 from Appendix 2 here >

Secondary data collection and Measurement:

For a comprehensive analysis, secondary data were collected by reviewing the social media and websites of 80 firms and their founders who met the criteria. In total, 267 observations were made, including 69 LinkedIn profiles of firms, 72 firm websites, 37 Facebook pages, and 88 LinkedIn profiles of entrepreneurs. Eighty-one percent of the founders are males, and the rest are non-males. In terms of industry, software, information technology and services, and manufacturing firms constituted 28%, 24%, and 11%, respectively. Firm products include agricultural solutions, medical devices and software, transportation, and computer hardware. Seventy-nine percent of these respondents are incorporated under the legislation of NL.

To evaluate expertise in human capital, data was collected on founders' work experience, firm age, and the number of organizations where they have worked and founded. The diversity of the team members was also examined, particularly the proportion of non-male and non-Caucasian individuals, along with the educational backgrounds of the founders.

Social capital proficiency was assessed by looking at the number of social media platforms used, the LinkedIn followers and Facebook likes of both the founders and their companies, and

the firms' connections with different stakeholders. The frequency of company updates posted on LinkedIn and the number of firms sharing information about the company and its founders on their websites were also considered to evaluate the extent of active knowledge sharing.

Variable definition, coding of variables, and descriptive statistics of secondary observations are reported in Table 5.

< Insert Table 5 from Appendix 2 here>

FINDINGS AND DISCUSSION

The purpose of data collection from both primary and secondary sources was to investigate how efficient NL founders and firms are in terms of human capital, social capital, innovation, and active knowledge sharing. This section is divided into two sections: 1) Areas where NL founders are quite efficient, which may allow them to attract investors to invest through ECF. 2) Areas where further attention and improvement might be necessary for getting better responses in ECF fundraising.

SPSS statistics have been used to analyze the data. Data was coded based on our measurement scale (Tables 4 and 5). Secondary observations are initially recorded per the measurement criteria (Tables 4 and 5). For example, entrepreneurs who have completed graduation are assigned the code "7" in the education field, as per our measurement scale. Once the coding is complete, the spreadsheet is imported into SPSS for analysis. The results of this analysis are presented in Tables 4 and 5.

Areas Where NL Companies Have Advantages

Human Capital: The findings suggest that NL entrepreneurs are highly experienced and educated. As per our secondary data, the average age of the firms is 11.43 years, and the average experience of entrepreneurs is 15.73 years. Based on information from their LinkedIn pages, 55% of companies have been operating for a minimum of five years. Additionally, 68% of the entrepreneurs have more than ten years of working experience. Nose & Hosomi (2023) investigated successful founders of the leading Japanese ECF platform, while O'Reilly et al. (2023) examined the cleantech firms that had successfully raised funds from twenty prominent ECF platforms across Europe. The average age of these firms was 6.05 and 5.05 years, respectively. This substantial experience might be advantageous for NL firms in raising funds through ECF as scholars find that investors perceive the founder's experience as the foremost criterion for the selection (Kleinert & Mochkabadi, 2022; Lim & Busenitz, 2020; Troise et al., 2022). It is found that, on average, the entrepreneurs have worked in more than six different organizations in their careers, ensuring they have diverse experience. This varied experience could be advantageous, as launching a tech company requires a wide range of skills and competencies, forcing founders to assume multiple roles (Piva & Rossi-Lamastra, 2018; Zhang et al., 2024). Regarding the relevance of industry experience, the average response ranges from "Relevant" to "Mostly relevant", with 50% of respondents rating it as "Mostly relevant" or "Very relevant". This is a good sign as professional experience as an entrepreneur and work experience in the same industry are pivotal for ECF success (Dority et al., 2021).

On average, more than 20% of team members have previous experience in diverse fields. During our review of different firms' websites, it was also observed that most teams comprise individuals with diverse educational backgrounds and experiences. Many small organizations do

not have enough funds or cash flow to recruit people for all these functions. Hence, teams with diversified experience can mitigate this problem by leveraging their diversified expertise (Bui & Sprague R., 2017; Mochkabadi & Volkmann, 2020; Piva & Rossi-Lamastra, 2018).

The founders of NL are well-educated, with most having completed undergraduate degrees and some holding master's or PhD qualifications. Based on the LinkedIn profiles of the founders, 88% have completed a bachelor's degree or higher, with 52.5% holding a master's and 20% possessing a PhD. D'Agostino et al. (2022) investigated firms that secured 2.5 times their target amount through ECF. In their sample, 8% of the founders had PhD holders. Forty-four percent of our sample firms have at least one founder who has a post-graduate degree. Martínez-Gómez et al. (2020) investigated firms based in the United Kingdom and Spain that secured 1.45 times their target amount through ECF. In their sample, 17% of the firms had at least one founder who had a post-graduate degree. Higher education is important for ECF success as individuals with higher levels of education possess not only greater knowledge but also the essential skills necessary for the survival and success of ventures (Barbi & Mattioli, 2019). Hence, a founder's education level signals have been considered an important human capital element (An & Kim, 2019; Block et al., 2018; Nitani et al., 2019). On a 5-point scale, the average relevance of founders' education with their business is 3.85, i.e., between “Relevant” and “Mostly Relevant.” At the same time, 73% of the respondents' score was “4” or “5”, i.e., “Mostly relevant” or “Very relevant.” Similar observations were made while reviewing the founders' LinkedIn profiles. For instance, the majority of the founders of software firms have a bachelor's in computer science. Relevance between education and the nature of company is important, as researchers emphasized industry-specific education while explaining the importance of education for ECF (Cicchiello et al., 2021; Piva & Rossi-Lamastra, 2018; Zhang et al., 2018).

Social Capital. Wasti & Ahmed (2023) investigated 783 projects that raised funds from 100% to 841%, the average number of social forums of the entrepreneurs was 2.83. In another study by Martínez-Gómez et al., (2020), the average number of social platforms was 2.89, and the sample firms had raised 1.5 times the target amount from ECF. Based on survey data, on average, the NL firms sample have more than three social media accounts. However, based on secondary observations, firms have an average of more than two social media accounts. In the primary survey, respondents were asked about the number of social accounts they use. The average is calculated by dividing the total number of accounts by the number of respondents. For the secondary observations, five specific types of social accounts have been considered to compute the average score. Each account type received a score of 1 point, and the total score was then divided by 5 to obtain the average. Notably, only 30% of firms maintain accounts on YouTube and Instagram, which significantly lowered the average score. This discrepancy likely accounts for the variations observed between the averages from primary responses and secondary observations. A positive finding is that 98% of firms have active accounts on LinkedIn. Projects with a stronger presence on social media are more likely to become well-known to potential investors (Banerji & Reimer, 2019).

Respondents also described themselves as well connected with their stakeholders. On a 5-point scale, the average score of respondents is 3.02, which implies that they are connected with the key stakeholders, while “2” defines somewhat connected and “4” defines very connected. 73%, 46%, and 38% of respondents reported “4” or “5” (5= extremely connected, 4= very connected) for customers, investors, and industry associations, respectively. Other stakeholders include banks, other entrepreneurs, and industrial associations, with whom they have reported relatively lower levels of connections. Additionally, the average score of communication frequency was 2.97 on a

5-point scale that measured how frequently they communicate with their stakeholders, while “2” defines 1 to 5 times in a year and “3” defines 6 to 10 times in a year. Fifty percent and 35% of respondents communicate once a month with customers and investors, respectively. The findings are in line with another study where researchers found the people of NL to be highly social, friendly, and well-connected with their community (Issahaku & Adam, 2022). Strong social connections can be pivotal in ECF success (Dao et al., 2024; Li et al., 2023; Li et al., 2024). One of the major challenges of ECF is investors' lack of trust in founders due to information asymmetry issues (Barbi et al., 2023; Liang et al., 2019; Troise, Tani, et al., 2020). The enhanced connections of NL entrepreneurs may foster mutual understanding, minimize perceived uncertainty, and positively influence investors' decisions.

The average number of followers of NL firms and NL founders on LinkedIn are 783 and 1376, respectively. Troise, Tani, et al. (2020) investigated the firms that raised funds from the Italian ECF market, the first European country to define regulations for ECF. They studied the firms that raised 1.5 times the target amount from ECF. The average LinkedIn followers of their sample firms were 399.61. Forty-two percent of the founders in the current study have more than 1000 followers. When founders share their investment proposals on social media, their followers frequently repost these posts, enabling founders to leverage not only their networks but also the networks of others (Wahjono et al., 2020). A higher number of followers can facilitate herding effects, the interaction and influence of one affect the community members' actions and opinions (Dao et al., 2024; Wasti et al., 2024). Hence, studies find a significant positive impact of social media likes, connections, and number of followers on ECF success (Vrontis et al., 2021; Wasti & Ahmed, 2023).

Seventy-three percent of respondents reported that they received recognition from different communities. While reviewing different organization websites, it has been found that most of the recognitions are in the form of funding opportunities or awards from different communities. For instance, some female entrepreneurs have been recognized as one of Canada's top 100 female entrepreneurs. Additionally, the firms' websites have been reviewed to examine whether they have been endorsed or affiliated with community partners. Forty-nine percent of the companies' websites disclosed information about their affiliated members. It is well established that the lack of trust is one of the major challenges to ECF success due to information asymmetry issues (Barbi et al., 2023; Liang et al., 2019; Troise, Tani, et al., 2020). Hence, third-party endorsement makes entrepreneurs and their projects more trustworthy by confirming the skills of those involved and reducing differences in information (De Crescenzo et al., 2022)

Innovation. Several criteria were used to measure the innovativeness of NL entrepreneurs. (see Table 3). Using a dichotomous scale (1= yes, 0= No), the average score is 0.69, indicating a high level of innovativeness. Over the past five years, 96% and 85% of firms engaged in new product development and new technology development, respectively, a trend consistent with our observations from reviewing their websites. For example, most software companies have introduced new solutions for various user needs, while medtech firms have developed new devices to address diverse health issues.

However, the findings diverges from previous research exploring NL entrepreneurs' innovation focus (Walsh & Winsor, 2019), who find that NL scores poorly on many aspects of innovation metrics. It is important to note that the respondents of this study are predominantly founders of tech-based firms that are highly involved in innovation. Additionally, the respondents are highly educated. Empirical evidence suggests that education significantly impacts innovation

(Barbi & Mattioli, 2019; Ko & McKelvie, 2018). The findings may not generalize to other industries in NL. Nevertheless, the strong orientation towards innovation undoubtedly provides tech-based firms in NL with a competitive edge in attracting investors. Researchers conclude that innovation signals entrepreneurial diligence and potential for higher returns, which frequently instill interest among investors (Di Pietro et al., 2023; Mochkabadi et al., 2024).

Areas Require Further Improvement

Human Capital. While NL founders possess substantial experience and education, the representation of members other than male and non-Caucasian team members stands at only 26.56% and 24.83%, respectively. Similar observations were noted in our primary responses. Of 88 founders whose LinkedIn profiles were reviewed, 83% were male. The ratio of males and females in NL is 49 and 51 (Statistics Canada, 2021). Thus, the ratio of male and female founders in NL is very low. More concerning, 42.5% of the firms of the NL samples have 100% percent males on their management team and no non- males. Research indicates that ensuring team diversity is critical for success in ECF. Female founders can enhance role congruity perceptions among potential investors, leading to improved funding outcomes (Prokop & Wang, 2022). Similarly, Nose & Hosomi (2023) find that 81% of successful Japanese ECF firms had female founders.

Among the team members, 24.83% are non-Caucasian. This is noteworthy given that over 23% of Canada's population are immigrants (Statistics Canada, 2022). Although this proportion of non-Caucasian team members seems promising, the review of websites and LinkedIn profiles indicates a trend: organizations founded by non-Caucasian individuals often have a team that is entirely non-Caucasian, while those led by Caucasian founders typically employ a majority of

Caucasian people. Among organizations with at least one non-Caucasian member, 57% have entirely non-Caucasian. Conversely, 65% of firms with at least one Caucasian member employ an entirely Caucasian-based team. Only 20% of firms have a mix of both Caucasian and non-Caucasian team members.

The government of NL is keen to attract immigrant entrepreneurs, and they have introduced two programs to attract international entrepreneurship (Graham & Pottie-Sherman, 2021). Local investors are a significant source of ECF (Niemand et al., 2018; Nitani et al., 2019). Evidence suggests that people have trust and affection for their local community people, which might increase their investment propensity (Butticè & Vismara, 2022; Wahjono et al., 2020). Similarly, local founders might consider including people from different ethnic backgrounds (Maula & Lukkarinen, 2022). Investors from various countries prefer putting their money into businesses whose teams include people of their nationality. In addition to getting funding, consideration of ethnic diversity might promote innovation as it is well established that ethnic diversity has a significant positive impact on innovation (Lee, 2015; Mohammadi et al., 2017; Quintana-García et al., 2022).

Innovation. While in general the study found NL tech founders highly innovative, they scored low in terms of filing patents. The average score is 0.38, notably lower compared to other measures of innovations that have been used to investigate the innovation orientation of NL founders. In the literature of ECF, patents are highly cited as a sign of innovation (Skirnevskiy et al., 2017; Troise et al., 2022). Applying for patents not only enhances a firm's intellectual capital but also communicates its innovation capabilities to investors (Honjo & Kurihara, 2023). Moreover, patents act as a significant and costly signal that can bolster trust among investors (Battaglia et al., 2022).

Active knowledge sharing. The findings also highlighted the founders' lack of proactive engagement in sharing knowledge and information with stakeholders. The findings align with a previous study (Walsh & Winsor, 2019) that observed inadequate peer-to-peer interaction among NL founders. Analyzing the LinkedIn activity of 69 firms and 88 founders over the past three months, it has been found they posted or reposted content on average only 0.08 and 0.09 times per day, respectively. In other words, they posted content about once every 12 days. Studies investigated firms' update frequency during the fundraising period, and the average frequency range per day was 0.18 to 1.70 (Block et al., 2018; Czaja & Röder, 2022; Lukkarinen et al., 2022). However, these findings reflect the campaign period when firms were actively pitching for funds, suggesting that the number of updates may have been higher to attract more investors. Nevertheless, 27 founders, or 30% of our observations, had no LinkedIn post in the last three months. In our primary data, the score of entrepreneurs in terms of updating information is 3.50 (table 4) on a 5-point scale ("3" = sometimes, "4" = often, and "5" = regularly). Researchers highly stressed the importance of continuous updates as updates mitigate the uncertainty arising from information asymmetry and enable founders to showcase their skills and commitments to investors (Dao et al., 2024; De Crescenzo et al., 2022).

The websites of 72 firms were also reviewed to examine whether they are sharing their founder's and team members' information. Fifty-eight percent of companies disclosed their team members' information. The literature review shows that founders' backgrounds, especially their education and experience, play a pivotal role in ECF investment. Hence, disclosing senior members' information may enable NL founders to instill more confidence among investors. Wasti & Ahmed (2023) find that entrepreneurs' information signals the quality of the firms and positively influences ECF success.

Understanding about ECF. Finally, the level of entrepreneurs' understanding of ECF is only 1.96 on a 10-point scale (Table 5). The finding aligns with other studies (Hall et al., 2014), which observed indifference and ignorance among NL entrepreneurs about different government support mechanisms. They advocated arranging training and information sessions to increase the knowledge and awareness of entrepreneurs. Hence, this is an area where policymakers should pay attention to create interest among both investors and entrepreneurs. As discussed above, raising funds through ECF requires the fulfillment of some steps and some legal procedures. Additionally, like any other investment, ECF entails some risks. Therefore, a deeper understanding of ECF could help founders and potential investors make more informed decisions about ECF opportunities.

LIMITATIONS AND FUTURE RESEARCH

This study views Equity Crowdfunding as a promising financing alternative that can help address the funding challenges faced by tech entrepreneurs in Newfoundland and Labrador (NL), while also fostering entrepreneurship in the province. To this end, the study examines the effectiveness of NL tech entrepreneurs in areas such as human and social capital, innovation, and active knowledge sharing—factors that scholars consider essential for attracting investors. While the study has the potential to make a significant contribution to the ECF literature and offer valuable implications for both scholars and practitioners, it is not without limitations.

One significant limitation of this study is its small number of survey respondents. The survey spanned over three months, which is a considerable duration. The government of NL is still the lead supporter of entrepreneurship (Carter, 2022); hence, ECF might not be an interesting option for NL entrepreneurs. Despite this, there is an ongoing governmental initiative aimed at reducing firms' dependence on public funding (Palladini, 2015). Additionally, the criteria outlined in the

recruitment letter may not have been universally applicable to all firms. However, our secondary observations covered a broader scope, including 69 LinkedIn pages, 72 websites, 37 Facebook pages, and 88 entrepreneurs' LinkedIn profiles. These secondary findings often reinforced our primary data, suggesting robustness in our observations. Observation-based studies are typically preferred over self-reported data due to lower risks of respondent misrepresentation on social media platforms (Banerji & Reimer, 2019). Also, some segments of our findings are in line with past studies (Issahaku & Adam, 2022; Walsh & Winsor, 2019). Nonetheless, future research could benefit from an extended study period to gather more responses and bolster the credibility of the findings.

Three major stakeholders of ECF are investors, founders, and the ECF platforms (Beaulieu et al., 2015; Buttice & Vismara, 2022). A systematic literature review has identified the factors that investors consider important. However, generalizing the preferences of investors in NL might not be feasible, as cultural orientations and preferences could differ. For instance, Walsh & Winsor (2019) note that NL has a low risk-taking culture, which may pose a significant challenge to the growth of ECF, given its inherent risk due to lower regulatory requirements (Hsueh et al., 2017; Lee, 2019). Understanding NL investors' preferences is crucial, as the number of investors and the amount invested are the key indicators of ECF success (Armour & Enriques, 2018; Ralcheva & Roosenboom, 2020). Future studies might explore the issue further. Another major stakeholder of ECF is the platforms that play a pivotal role in its success (Dehghani et al., 2023). Considering the contextual differences in culture and legislation, it is argued that the mechanism of the ECF platforms should be tailored to meet the requirements of specific regions (Al-Mulla et al., 2022). Future research could explore the need for separate ECF platforms tailored to NL's cultural and

legal specifics and propose a customized framework that aligns with the province's entrepreneurial ecosystem.

The study concentrated on tech-based companies, which often face difficulties in securing capital due to their unpredictable prospects and issues related to information asymmetry (Honjo & Kurihara, 2023; O'Reilly et al., 2023). Future research may consider including other types of non-technology based firms to assess NL founders' competence across human, social, innovation, and knowledge-sharing criteria.

IMPLICATIONS FOR SCHOLARS

A systematic literature review (SLR) was conducted based on the most recent studies to understand the factors that might contribute to the success of ECF financing. This scientific way of literature might provide a comprehensive understanding of ECF success factors. Additionally, the SLR highlighted the areas that have gotten minimum attention in the past, and the study attempted to address those issues partially. Hence, the study findings might have noteworthy implications in ECF literature.

This is the first Canadian and rural area-based study in the ECF literature. Most of the ECF literature is based on Europe and the USA, which might not be generalized to other regions as the ECF of each country is operated by different legislation (Martínez-Gómez et al., 2020; Mazzocchi & Lucarelli, 2023). Additionally, different countries have different cultures and value systems, which may promote and hinder ECF. For instance, Lewis et al. (2021) find that collectivist political cultures, such as China and South Korea, are skeptical of crowdfunding due to traditional norms of relying on government or family support. In contrast, individualistic cultures like the US and the UK prioritize personal autonomy and risk-taking. Hence, scholars

suggested more research in different geographical regions (Martínez-Gómez et al., 2020; Mazzocchi & Lucarelli, 2023). Thus, the study contributes to the literature on ECF. Additionally, most of the studies are based on prominent ECF platforms of popular ECF platforms and ignore the remote or rural area founders and their potential for ECF. Lack of adequate financing is a major problem for rural entrepreneurs (Elkafrawi & Refai, 2022; Hall et al., 2014; Rahman et al., 2023), where ECF can be an important alternative. Hence, the findings of our study might have important implications for understanding the potential of remote entrepreneurs for ECF.

While systematic literature on ECF has been conducted in the past (Cai et al., 2021; Camilleri & Bresciani, 2022; Mazzocchi & Lucarelli, 2023; Mochkabadi & Volkmann, 2020), our systematic review might have important implications for two reasons. First, only recent studies are considered in this study. Second, while other studies have adopted a holistic approach, this review particularly focused in detail on ECF success factors, which might provide an in-depth understanding of the factors that influence ECF success.

The literature review has discovered some areas that have gotten less attention. As seen from Table 1, the number of qualitative studies is very low compared to quantitative studies. Finally, few studies have focused on founders' knowledge-sharing and innovation orientation for ECF success compared to the founders' human and social capital. These observations might have important implications for understanding the area where future research might contribute and reduce the research gap.

IMPLICATIONS FOR FOUNDERS

The purpose of the research is to assess the extent to which the NL companies are ready to capitalize on the benefits of ECF. NL companies are proficient in different aspects of human and social capital and innovation. As highlighted in the literature review, strengthening these areas would significantly enhance the ability to build trust and confidence among ECF investors (De Crescenzo et al., 2022; Mochkabadi et al., 2024). However, enhancing team diversity in terms of gender and ethnic diversity might enhance their acceptance and potential to be successful in ECF. The areas requiring the most focus involve increasing active knowledge sharing with stakeholders regarding the company's progress and development. The study found that 42% of companies have not provided information about their founders and top management on their websites. Additionally, their presence on social media, where they could share updates about the company's progress, is notably minimal. ECF literature suggests that regular updates during the campaign period can educate investors about the company and enhance its potential for success (Block et al., 2018; Czaja & Röder, 2022; Lukkarinen et al., 2022). However, in addition to ECF literature, other entrepreneurial literature shows that active knowledge-sharing enhances brand loyalty, organizational identity, and innovation. Sharing knowledge helps founders establish a strong organizational identity (Nevin et al., 2017; Zhao et al., 2022). Therefore, updating and posting about various organizational activities, even before applying for ECF, can enhance the NL organization's identity. One of the major barriers to ECF's success is investors' lack of trust in companies due to information asymmetry issues. Hence, having a strong identity before applying for the ECF can build stakeholders' brand identity and trust over time. Additionally, it can better inform investors about the company profile, values, and the organization's functions. Therefore, when these firms apply for ECF, they might earn a higher acceptance rating among investors.

IMPLICATIONS FOR POLICYMAKERS

Policymakers can play a significant role in prompting ECF in NL. Initiatives can be undertaken to improve key stakeholders' understanding of the ECF process, its advantages, and the associated risks. This might enable both companies and investors to make better decisions regarding ECF. Additionally, measures might be taken to investigate the necessity of customized platforms to address NL's cultural and geographical issues. The ECF platform's procedure and companies' preferences regarding platform selection vary based on country, culture, and industry (Cicchiello et al., 2020; Rykkja et al., 2020; Schwencke, 2019). For instance, although the European Union has tried to propose a harmonized equity crowdfunding regulation, each small country has its separate platform for differences in national regulations (Schwienbacher, 2019). Studies observed differences among the provinces of Canada in terms of different aspects of the entrepreneurial ecosystem (Spigel, 2017; Walsh & Winsor, 2019). Spiegel (2017) finds cultural, social, and material differences between Calgary and Waterloo. Al-Mulla et al. (2022) proposed a separate ECF platform tailored to address Qatar's cultural, social, and economic aspects. Considering the lower proportion of female entrepreneurs, the proposed platform may be tailored to encourage and attract female founding firms. Similarly, NL policymakers might consider prompting a separate ECF platform. However, one challenge of having separate platforms for smaller geographical areas is the risk of reduced profitability, as the number of companies raising funds and the total amount raised are crucial for platform profitability, and smaller areas typically generate lower funding amounts (Schwencke, 2019). In that case, policymakers might consider subsidizing the platforms to encourage their operation in NL.

The government of the NL is keen to reduce the dependency of entrepreneurs on government funds, which are mainly based on federal funds and the oil industry (Carter, 2022; Palladini, 2015).

ECF can create an alternative avenue for raising funds. Hence, understating the potential of the NL founders for ECF may enable policymakers to design courses of action to enhance the founders' potential. For instance, it has been observed that the NL founders' understanding of ECF is very low. Hence, policymakers can take measures to educate investors and founders about the potential of ECF, the risks associated with it, and the regulatory requirements for ECF.

CONCLUSIONS

The study examined the extent to which the NL founders are ready to capitalize on the potential of ECF. Considering the importance of cultural differences, a place-based approach has been adopted to understand the proficiency of NL founders in terms of human and social capital, innovation, and active knowledge sharing. These factors that have been frequently cited for ECF success. The evidence shows that NL founders are highly proficient in different factors, which might give them an advantage in the ECF platform. Conversely, areas where they must pay attention to further improvement to attract investors have been discussed. It is also found that the understanding of NL founders about ECF is inadequate, and policymakers should consider steps to mitigate this issue. Given the cultural diversity across provinces in Canada, there is potential for the establishment of a dedicated ECF platform in Newfoundland and Labrador (NL) to better address the unique contextual factors in the region. However, the study contributes to ECF literature by adopting a place-based approach to explore the potential of regions for ECF success that mainstream research often overlooked. Furthermore, given recent Canadian legislation, the study's findings may offer valuable insights for policymakers and other stakeholders.

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Appendix 1: EQUITY CROWDFUNDING PROCESS

Based on the ECF literature (Beaulieu et al., 2015; Buttice & Vismara, 2022; Lasrado & Lugmayr, 2014; Löher, 2017; Lukkarinen et al., 2016; D. Zhang et al., 2018). The typical progression of raising funds through ECF is given below.

First, entrepreneurs submit project applications to platforms, detailing aspects like funding goals, equity exchange proportions, financial forecasts, etc. They can convey this information through various mediums, such as images, videos, and text. In Canada, it is mandatory to submit offering documents outlining the basic information of the business, its activities, its officers, its financial condition, the amount it wants to raise, the investment, how the money raised will be used, and the risks associated with investing (Canadian Securities Administrators, 2021). The issuer also needs to mention the minimum amount that must be raised within 90 days from the day the form is available on the ECF platform. The maximum amount they can raise in 12 months is \$1,500,000 (Canadian Securities Administrators, 2021).

Second, equity crowdfunding platforms review project applications from entrepreneurs, conducting an investigative process primarily aimed at risk management. Platforms select promising projects for online launch through evaluation and due diligence while rejecting unsuitable ones. The website provider furnishes space to promising projects for project descriptions and offers features such as video posting, backer communication, traffic analysis tools for project pages, and integration with third-party payment processors for fund distribution to founders. It facilitates communication between backers and founders while ensuring a secure payment processing system for collecting funds from backers. In Canada, funding portals fall into two categories: registered and unregistered. If investors require investment advice, they should choose a registered portal. These portals must assess whether an investment is appropriate for the

investors' needs and financial situation. Conversely, unregistered funding portals do not offer investment advice and cannot evaluate the suitability of investments (Canadian Securities Administrators, 2021). The portal has several key responsibilities to ensure a smooth and transparent investment process. It must communicate the risks associated with investing to potential investors, ensuring they are fully informed before making any financial commitments. Additionally, the portal is entrusted with securely holding all investor funds until the company reaches its minimum funding target. If the company does not achieve this target, the portal is responsible for returning the full investment amount to each investor without any deductions or fees (Canadian Securities Administrators, 2021).

Third, investors navigate online to explore projects and decide whether to contribute and contribute money for fractions of ownership. In Canada, investors can contribute up to \$2,500 per crowdfunding offering or up to \$10,000 with suitability advice from a dealer (Canadian Securities Administrators, 2021).

In Canada, within 30 days after an offering close using the Start-Up Crowdfunding Exemption, the issuer or funding portal must provide each investor with a written confirmation. This confirmation includes the subscription date, closing date, details of the purchased security, price, total commissions and fees paid, and a copy of the completed offering document (Canadian Securities Administrators, 2021).

Appendix 2: TABLES AND FIGURES

Table 1

Descriptive Analysis of Literature

Description	Percentage (%)
➤ Type	
○ Journal/Article	91.15%
○ Conference Paper	8.84%
➤ Nature	
▪ Quantitative	85%
▪ Qualitative	6%
▪ Literature based	9%
➤ Region	
○ Europe	58%
○ United States	12%
○ Asia	11%
○ Middle East	1%
○ Australia	2%
○ Not Mentioned	16%

Table 2

Factors for ECF Success

Human capital	<p>Experience: startup, industry, managerial, and product experience.</p> <p>Education: Relevant education, business education.</p> <p>Team Size: Adequate number of team members.</p> <p>Team Diversity: Diversity in terms of education, experience, skills, gender, and ethnicity.</p>
Social capital	<p>Internal social network: The network was established in the ECF platform.</p> <p>External social network: personal network, network in social media, third-party endorsement.</p>
Innovation	<p>Incremental innovation: gradual innovation of existing state.</p> <p>Radical innovation: a breakthrough in terms of knowledge and capabilities.</p> <p>Patent, Trademark</p>
Active knowledge sharing	<p>Continuous communication and updates, Use of video and picture in pitch, and linguistic styles.</p>

Table 3

Measurement Items

Constructs	Items	References
Human Capital	<ul style="list-style-type: none"> • Please Choose the option that best represents your highest education level. • To what extent do you think your education is relevant to your business? • How many years of experience do you have as a founder or member of a management team? • How long the business has been operating? • To what extent do you think your experience is relevant to your business? • How many members do you have on the Management team? • What percentage of your management team identifies as a gender other than male? • What percentage of your management team identifies as a race/ethnicity other than White/ Caucasian? 	(Ahlers et al., 2015) (Vismara, 2016) (Y. Zhang et al., 2024)
Social Capital	<ul style="list-style-type: none"> • Level of connections entrepreneurs have with different stakeholders. • How frequently do they communicate with key stakeholders? • Types of social media they use for reaching stakeholders. • Has their business received any award or recognition in the local community? 	(Ahlers et al., 2015) (Kang et al., 2016)
Innovation	<p>Activities performed in the past and likely to be performed in the next five years in terms of:</p> <ul style="list-style-type: none"> • Introduce new product • Diversification into a new product • Expand into a new geographic area • Improve upon an existing product • Adopted environment-friendly product • Applied new technology • Collaboration with other business • Having patent and trademark • Created/revised business plan 	(Ahlers et al., 2015) (O’Cass & Weerawardena, 2009)
Effective communication	<ul style="list-style-type: none"> • How likely are entrepreneurs to be interested in keeping stakeholders updated? 	(Kromidha & Robson, 2021) (C. H. Lee & Zhao, 2022)

Table 4

Variable description of Survey and primary statistics

Variables		Obs (N)	Mean	Max	Min
Human Capital	Education	26	6.73	9	1
	Relevance of Education with business operation	26	3.85	5	2
	Experience				
	Firm's Age	26	3.00	5	2
	Entrepreneurs' Experience	26	3.46	5	1
	Relevance of experience with business operation	26	3.46	5	2
	Other than male members	26	2.58	5	1
	Other than Caucasian/white	26	1.96	5	1
Innovation	Diversified experience	26	3.42	5	1
	Innovation	26	0.69	1	0.3
	New Product	26	0.96	1	0
	Product Diversity	26	0.69	1	0
	Market Expansion	26	0.77	1	0
	Geographic Expansion	26	0.42	1	0
	Improvised product	26	0.69	1	0
	Environment Friendly	26	0.46	1	0
	Collaboration	26	0.73	1	0
	New Technology	26	0.85	1	0
	Patent/Trademark	26	0.38	1	0
	Business Plan	26	0.96	1	0
Social Capital	Social Connection	26	3.02	4.25	1.5
	Communication Frequency	26	2.97	4.38	1.38
	Number of Social Forums	26	3.54	6	1
	Third-Party Endorsement	26	0.73	1	0
Active Knowledge Sharing	Update	26	3.50	5	1
ECF knowledge	Extent of ECF knowledge	26	1.96	9	0

Explanation of variables

Education refers to the educational background of entrepreneurs, categorized as follows: no formal education=1, some high school=2, high school=3, some college/trade school=4, college/trade school diploma=5, some university=6, bachelor=7, masters=8, doctorate degree=9. The relevance of an entrepreneur's education to their start-up business is rated on a scale where 1 = not relevant and 5 = very relevant. Experience denotes the years of entrepreneurial experience, with categories ranging from 0-3 years=1, 4-6 years=2, 7-10 years=3, 10-13 years=4, and 13 years or more=5. The relevance of an entrepreneur's experience to their start-up business is assessed on a scale from 1 = not relevant to 5 = very relevant. The percentage of non-male members in the team is categorized as 1= less than 5%, 2=6% to 10%, 3=11% to 20%, 4=21% to 40%, 5= more than 40%. Similarly, the percentage of non-white/Caucasian members is categorized as 1= less than 5%, 2=6% to 10%, 3=11% to 20%, 4=21% to 40%, 5= more than 40%. Diversified experience reflects the percentage of team members with different backgrounds, categorized as 1= less than 5%, 2=6% to 10%, 3=11% to 20%, 4=21% to 40%, and 5= more than 40%. Innovation is determined by whether the start-up has engaged in innovative activities in the past five years,

where 1= yes and 0= no. Social connection gauges the extent to which entrepreneurs are connected with various stakeholders such as customers, friends and family, investors, suppliers, banks, investors, industry associations, other entrepreneurs, and potential collaborators, ranging from 1= not connected to 5= extremely connected. Communication frequency with stakeholders is rated on a scale of 1= less than once a year, 2= 1 to 5 times a year, 3= 6 to 10 times a year, 4= once a month, and 5= once a week. The number of social forums indicates the count of social platforms where the start-up maintains accounts. Third-party endorsement assesses whether the entrepreneur has received funding or awards from stakeholders, with 1= yes and 0= no. Active knowledge sharing measures the extent to which firms update on social platforms, ranging from 1= rarely done to 5 = regularly done. Finally, ECF knowledge of entrepreneurs is rated on a scale from 0 to 10, where 0= not at all aware and 10= fully aware.

Table 5

Variable description of Secondary data and summary statistics

Variables		Obs (N)	Mean	Max	Min	Findings (Mean) of Similar studies (if applicable)
Human Capital	<i>Experience</i>					
	Firm's Age	69	11.43	81	1	11.80
	Entrepreneurs Experience	88	15.73	46	1	(Troise et al., 2022)
	<i># of Organizations Experience</i>	88	6.12	25	1	
	<i>Other than Male member (%)</i>	40	26.56	75	0	11.1
	<i>Other than Caucasian (%)</i>	40	24.83	100	0	(Vismara, 2016)
	<i>Education</i>	80	7.46 7=Graduate	9 9=Phd	5 5=college	3.28 3=Some graduate (Johan & Zhang, 2022)
Social Capital	<i>Previous Founder experience</i>	88	1.39	6	1	
	<i>Number of Social Forums</i>	72	2.54	5	1	3.16
	<i>Number of followers (F)</i>					
	Firm's (F)	69	783	5080	17	
Active Knowledge Sharing	Entrepreneurs (F)	88	1376	9860	43	1146.68
	<i>Third-Party Endorsement</i>	72	0.49	1	0	(Banerji & Reimer, 2019)
						0.73
Active Knowledge Sharing	<i>Information about Founders/Team</i>					(Mochkabadi et al., 2024)
	<i>Number of posts or updates (per day)</i>					
	Firm's pages	68	0.08	1.36	0	
	Entrepreneurs' pages	88	0.09	0.85	0	

Explanation of variables

Experience encompasses the number of years the start-up has been operating and the professional background of its entrepreneurs. The number of organizations indicates the total count of organizations where the founder has previously worked. TMT size refers to the total number of team members, including founders. The percentage of females and non-Caucasians denotes the proportion of team members who are female or not Caucasian. Education pertains to the educational attainment of entrepreneurs, classified as follows: no formal education=1, some high school=2, high school diploma=3, some college/trade school=4, college/trade school diploma=5, some university=6, bachelor's degree=7, master's degree=8, doctorate degree=9. Previous start-up experience refers to the number of start-ups where the entrepreneur has worked as a founder. The number of social forums indicates how many social platforms the start-up is active on. The number of LinkedIn followers includes both the start-up and its founders. Third-party endorsement assesses whether websites mention the start-up's affiliations, rated as 1 for yes and 0 for no. The frequency

of posts or updates (per day) is based on the number of posts made by the start-up and its founders in the last 90 days. Information shared about entrepreneurs is similarly assessed based on whether websites mention their affiliations, rated as 1 for yes and 0 for no.

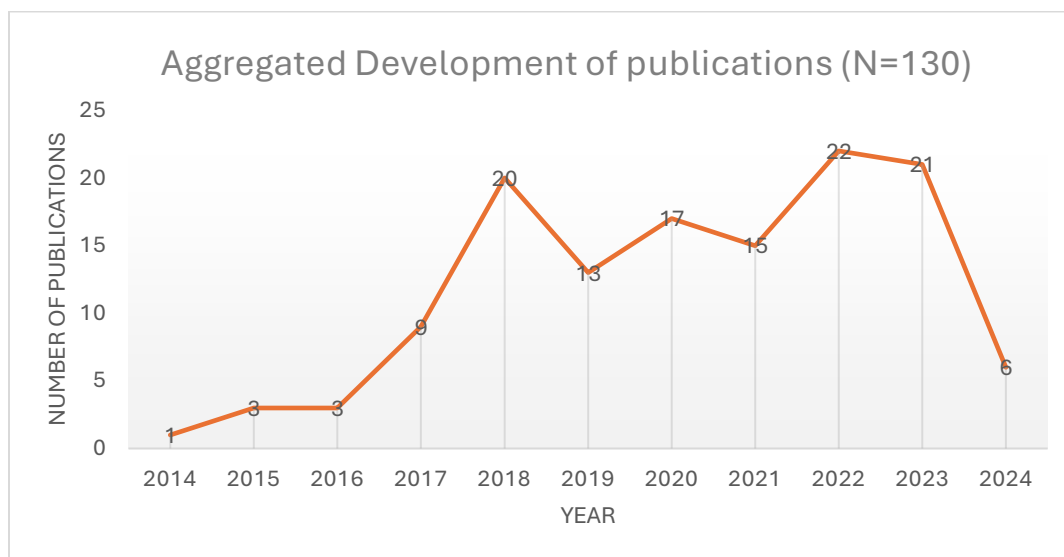


Figure 1: Aggregated Development of Publications

Appendix 3: ETHICS APPROVAL



Interdisciplinary Committee on
Ethics in Human Research (ICEHR)

St. John's, NL, Canada A1C 5S7
Tel: 709 864-2561 icehr@mun.ca
www.mun.ca/research/ethics/humans/icehr

ICEHR Number:	20241365-BA
Approval Period:	February 29, 2024 – February 28, 2025
Funding Source:	MUN [RIS# 20240210]
Responsible Faculty:	Dr. Jacqueline Bartlett Faculty of Business Administration
Title of Project:	<i>Exploring Equity Crowd Funding Potential in Newfoundland and Labrador</i>

February 29, 2024

Mr. Md. Jahangir Alam Zahid
Faculty of Business Administration
Memorial University

Dear Mr. Zahid:

Thank you for your correspondence addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) for the above-named research project. ICEHR has re-examined the proposal with the clarifications and revisions submitted, and is satisfied that the concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* for one year. ICEHR approval applies to the ethical acceptability of the research, as per Article 6.3 of the *TCPS2*. Researchers are responsible for adherence to any other relevant University policies and/or funded or non-funded agreements that may be associated with the project. If funding is obtained subsequent to ethics approval, you must submit a Funding and/or Partner Change Request to ICEHR so that this ethics clearance can be linked to your award.

The *TCPS2* requires that you strictly adhere to the protocol and documents as last reviewed by ICEHR. If you need to make additions and/or modifications, you must submit an Amendment Request with a description of these changes, for the Committee's review of potential ethical concerns, before they may be implemented. Submit a Personnel Change Form to add or remove project team members and/or research staff. Also, to inform ICEHR of any unanticipated occurrences, an Adverse Event Report must be submitted with an indication of how the unexpected event may affect the continuation of the project.

The *TCPS2* requires that you submit an Annual Update to ICEHR before February 28, 2025. If you plan to continue the project, you need to request renewal of your ethics clearance and include a brief summary on the progress of your research. When the project no longer involves contact with human participants, is completed and/or terminated, you are required to provide an annual update with a brief final summary and your file will be closed. All post-approval ICEHR event forms noted above must be submitted by selecting the *Applications: Post-Review* link on your Researcher Portal homepage. We wish you success with your research.

Yours sincerely,

Alyson Byrne, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

AB/bc

cc: Supervisor – Dr. Jacqueline Bartlett, Faculty of Business Administration
Director, Research Initiatives and Services



Interdisciplinary Committee on
Ethics in Human Research (ICEHR)

St. John's, NL, Canada A1C 5S7
Tel: 709 864-2561 icehr@mun.ca
www.mun.ca/research/ethics/humans/icehr

ICEHR Number:	20241365-BA
Approval Period:	February 29, 2024 – February 28, 2025
Funding Source:	MUN [RIS# 20240210]
Responsible Faculty:	Dr. Jacqueline Bartlett Faculty of Business Administration
Title of Project:	<i>Exploring Equity Crowd Funding Potential in Newfoundland and Labrador</i>
Amendment #:	01

May 31, 2024

Mr. Md. Jahangir Alam Zahid
Faculty of Business Administration
Memorial University

Dear Mr. Zahid:

The Interdisciplinary Committee on Ethics in Human Research (ICEHR) has reviewed the proposed revisions for the above referenced project, as outlined in your amendment request dated May 24, 2024. We are pleased to give approval to recruit participants using publicly available contact information and your personal social media, as described in your request, provided all other previously approved protocols are followed.

The TCPS2 requires that you strictly adhere to the protocol and documents as last reviewed by ICEHR. If you need to make any other additions and/or modifications during the conduct of the research, you must submit an Amendment Request with a description of these changes, for the Committee's review of potential ethical issues, before they may be implemented. Submit a Personnel Change Form to add or remove project team members and/or research staff. Also, to inform ICEHR of any unanticipated occurrences, an Adverse Event Report must be submitted with an indication of how the unexpected event may affect the continuation of the project.

Your ethics clearance for this project expires February 28, 2025, before which time you must submit an Annual Update to ICEHR, as required by the TCPS2. If you plan to continue the project, you need to request renewal of your ethics clearance, and include a brief summary on the progress of your research. When the project no longer requires contact with human participants, is completed and/or terminated, you need to provide an annual update with a brief final summary, and your file will be closed.

All post-approval ICEHR event forms noted above must be submitted by selecting the *Applications: Post-Review* link on your Researcher Portal homepage.

The Committee would like to thank you for the update on your proposal and we wish you well with your research.

Yours sincerely,

Alyson Byrne, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

AB/bc

cc: Supervisor – Dr. Jacqueline Bartlett, Faculty of Business Administration

Appendix 4: INFORMED CONSENT FORM AND SURVEY

Title: Exploring Equity Crowd Funding Potential in Newfoundland and Labrador

Researcher:

Md. Jahangir Alam Zahid
Master's Student
Faculty of Business Administration
Memorial University of Newfoundland
Email: mjazahid@mun.ca
Phone: 7096877595

Supervisor(s):

Principal Supervisor:

Jacqueline S. Bartlett, PhD
Associate Professor
Technology Sector
Faculty of Business Administration
Memorial University
Phone: 709.864.2021
Email: jsbartlett@mun.ca

Co-Supervisor:

Dr. Carlos Bazan
Assistant Professor
Technology Entrepreneurship
Faculty of Business Administration
Memorial University
Phone: 709 864 3437
Email: carlos.bazan@mun.ca

We invite you to participate in a research project titled “Exploring Equity Crowd Funding Potential in Newfoundland and Labrador.”

This form is part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. It also describes your right to withdraw from the study. To decide whether to participate in this research study, you should understand its risks and benefits enough to make an informed decision. Please take the time to read this form carefully and understand the information given to you. Please contact the researcher, Md. Jahangir Alam Zahid, if you have any questions about the study or would like more information before you consent,

It is entirely up to you to decide whether to participate in this research. If you choose not to participate in this research or if you decide to withdraw from the study once it has started, there

will be no negative consequences for you, now or in the future. You are free to skip any questions from any section and can decide to quit participating in the survey by closing the browser at any time. The system will not record your responses until you hit the ‘Submit’ button.

Introduction:

My name is Md. Jahangir Alam Zahid is a student of MSc in Management at Memorial University. I am conducting a study to assess the potential of equity crowdfunding in Newfoundland and Labrador.

Purpose of Study:

This study endeavors to determine the degree to which entrepreneurs in Newfoundland and Labrador could leverage the advantages of equity crowdfunding to raise money for their start-ups. This study also hopes to capture the interest and understanding of equity crowdfunding by potential Newfoundland and Labrador companies’ investors. Equity crowdfunding is raising funds by offering equity (common shares) to a broad spectrum of investors through online platforms.

What You Will Do in this Study:

In this study, we ask you to fill out a questionnaire. In the questionnaire, we ask you to indicate your answer from different options and your level of agreement with the statements, where (1) represents “Strongly Disagree,” and (5) represents “Strongly Agree.”

Length of Time:

The online survey will require approximately 10-12 minutes to complete.

Use of Demographic Information:

The survey includes questions about your demographic information, such as your educational background and professional experience. This information will only be used in the aggregate to (1) broadly explain who participated in the survey and (2) to determine whether NL investors as a community have the potential to use equity crowdfunding as a means of investing in NL companies. No person or company will be identified in any publication or report resulting from this survey.

Withdrawal from the Study:

If you do not wish to participate in this survey, please do not take the survey. Please note that we do not collect any personal identifiers. You are also free to stop participating at any time by closing your browser, and in that case, no responses entered will be recorded if you do not press the ‘Submit’ button. If you complete the survey but decide not to submit it, you can press the ‘Do Not Submit’ button, and the system will redirect you to the email intake form for the draw without submitting it.

Possible Benefits:

The findings will hopefully allow researchers to provide recommendations to policymakers in Newfoundland and Labrador to help the government facilitate the uptake of equity crowdfunding in the province.

Possible Risks:

There are no foreseeable risks associated with this survey.

Confidentiality:

Although the data from this research project will be published and presented at conferences, the data will be reported in aggregate form, making it impossible to identify individuals. Furthermore, since no personal identifiers are requested, it is impossible to associate a name with any given response. Therefore, please do not put your name or other identifying information on the survey.

Anonymity:

No personal data is collected, and anonymous responses (without personal identifiers) are collected through a website.

Use, Access, Ownership, and Storage of Data:

Access permission will restrict who can access, edit, distribute, and analyze surveys and will include only those individuals who require it for analysis or other authorized purposes. Your data will be used for research purposes and will not be shared with third parties without explicit consent. The collected data will be stored in the Qualtrics server, protected by firewall systems, and scans are performed regularly to protect against vulnerability. Data will be kept for at least five years, as required by Memorial University's policy on Integrity in Scholarly Research.

Collection and/or Storage:

Qualtrics is the currently approved survey tool for Memorial University. Data collected from you as part of your participation in this project will be hosted and/or stored electronically by Qualtrics, subject to their privacy policy and any relevant laws of the country in which their servers are located. Therefore, the confidentiality of data may not be guaranteed in rare instances, for example, when government agencies obtain a court order compelling the provider to grant access to specific data stored on their servers. If you have questions or concerns about how your data will be collected or stored, please contact the Principal Investigator and/or visit the provider's website for more information before participating. Further details about Qualtrics can be found at <http://www.qualtrics.com>.

Reporting of Results:

This study is a part of the Principal Investigator's master's program. The study's results will be used in the thesis and related papers. The results will not be shared with participants individually. The published master's thesis will be available through Memorial's QEII library using this link: <https://collections.mun.ca/digital/collection/theses/search>.

Questions:

You are welcome to ask questions before, during, or after participating in this research. If you would like more information about this study, please contact:

Md. Jahangir Alam Zahid
Master's Student
Faculty of Business Administration
Memorial University of Newfoundland
Email: mjazahid@mun.ca
Phone: 7096877595

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to comply with Memorial University's ethics policy. If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861

Consent: By completing this survey, you agree that:

1. You have read the information about the research.
2. You have been advised that you may ask questions about this study and receive answers prior to continuing.
3. You are satisfied that any questions you have have been addressed.
4. You understand the study and what you will be doing.
5. You understand that you are free to withdraw participation from the study by closing your browser window or navigating away from this page without giving a reason and that doing so will not affect you now or in the future.
6. You understand that you may skip any questions you do not wish to answer.
7. You understand that the data are being collected anonymously, so your data cannot be removed once you submit this survey.

By consenting to this online survey, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Please retain a copy of this consent information for your records.

Clicking Continue below and submitting this survey constitutes consent and implies your agreement to the above statements.

Measures: Human Capital

1. Please choose the option that best represents your highest educational level achieved:

2. No formal education
3. Some high school
4. High school diploma
5. Some college/trade school
6. College/Trade School Diploma
7. Some University
8. Bachelor's Degree
9. Masters' Degree
10. Doctorate Degree
11. Other or prefer not to say:

2. To what extent do you think your education is relevant to your business?

1. Not relevant
2. Slightly relevant
3. Relevant
4. Mostly relevant
5. Very relevant

3. How long has your business been operating?

1. Less than one year
2. 1 to 5 years
3. 5 to 10 years
4. 10 to 15 years
5. More than 15 years

4. How many years of experience do you have in the role of founder or member of a management team?

1. 0-3
2. 4-6
3. 7-10
4. 10 to 13
5. 13+

5. To what extent is your past work experience connected with your business?

1. Not relevant
2. Slightly relevant
3. Relevant
4. Mostly relevant
5. Very relevant

6. Which industry best describes your business?

E-Commerce

Software and Services

Fintech

Consumer Electronics

Telecommunications

Edtech

FoodTech

MedTech

LegalTech

OceanTech

CleanTech

Nanotechnologies

Quantum Tech

Hydrogen and fuel cell industry

Supply Chain and Logistics

Data Storage and Security

Health and Wellness

Manufacturing

Internet of Things

Hardware

Other: _____

7. What percentage of your Management Team identifies as a gender other than male?

1. Less than 5%
2. 6%-10%
3. 11%- 20%
4. 21%-40%
5. More than 40%

8. What percentage of your Management Team identifies as a race/ethnicity other than white/Caucasian?

1. Less than 5%
2. 6%-10%
3. 11%- 20%
4. 21%-40%
5. More than 40%

9. What percentage of your Management Team has experience working in an industry other than the industry in which your business currently operates?

1. Less than 5%
2. 6%-10%
3. 11%- 20%
4. 21%-40%
5. More than 40%

Measures: Understanding of ECF

1. Prior to this questionnaire, on a scale of 0 to 10 (with 0 being not at all and 10 being fully aware), to what extent were you familiar with Equity Crowdfunding as a method of financing your business?

Not At All

Fully Aware

1 2 3 4 5 6 7 8 9 10

Measures: Social Capital

- 1. On a scale of 1 to 5 (with 1 being not connected at all and 5 being fully connected), how would you describe your level of connection with the following stakeholders in your entrepreneurial ecosystem (locally)?**

	Not Connected	Somewhat Connected	Connected	Very Connected	Extremely Connected
Customers	1	2	3	4	5
Friends and Family Investors	1	2	3	4	5
Suppliers	1	2	3	4	5
Bank	1	2	3	4	5
Investors	1	2	3	4	5
Industry Associations	1	2	3	4	5
Other Entrepreneurs	1	2	3	4	5
Potential Collaborators	1	2	3	4	5

- 2. How often do you communicate with the following people/entities (local, domestic, and global)?**

	Less than Once a Year	1 to 5 times a year	6 to 10 times a year	Once a Month	Once a Week or More
Customers	1	2	3	4	5
Friends and Family Investors	1	2	3	4	5
Suppliers	1	2	3	4	5
Bank	1	2	3	4	5
Investors	1	2	3	4	5
Industry Associations	1	2	3	4	5
Other Entrepreneurs	1	2	3	4	5
Potential Collaborators	1	2	3	4	5

- 3. Which Social Media channels do you have for your business?**

	Yes	No
Website		
Facebook		
YouTube		
Instagram		
Tik Tok		
LinkedIn		
Quora		
Reddit		
Other: Please specify		

4. Has your business been recognized publicly from any community or from the government?

- ☐ Yes
- ☐ No

Measures: Innovation

1. Which of the following activities have you performed over the last 5 years (or since you started operating)? Check all that apply.

	Yes	No
Introduced a new product or service to the market		
Diversified into a new product or service line		
Expanded into a new market segment		
Expanded into a new geographic area		
Improved upon an existing product or service		
Adopted an environmentally friendly process or practice		
Entered into a collaboration with another business		
Adopted a new technology in your business		
Filed a patent(s) or provisional patent(s)		
Filed a trademark(s)		
Created/revised a business plan		

Measures: Active Knowledge Sharing

1. How often do you update, refresh, and promote your business on your social media channels?

	Less than Once a Year	1 to 5 times a year	6 to 10 times a year	Once a Month	Once a Week or More
Website	1	2	3	4	5
Facebook	1	2	3	4	5
YouTube	1	2	3	4	5
Instagram	1	2	3	4	5
Tik Tok	1	2	3	4	5
LinkedIn	1	2	3	4	5
Quora	1	2	3	4	5
Reddit	1	2	3	4	5
Other: Please specify	1	2	3	4	5