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Gender Gap in Entrepreneurial Potential in Finland and Reflecting Its Underlying Causes

ABSTRACT The gender gap in entrepreneurship is a widely recognized phenomenon meaning that women are less likely to start a business than men. However, increased gender equality is believed to remove barriers to female entrepreneurship. We used secondary data collected for Global Entrepreneurship Monitor from 2003, 2009, 2015, and 2021 to get closer to this phenomenon in Finland, one of the most equal countries in the world. The aim of the study was to clarify the gender gap in entrepreneurship potential in Finland during recent decades, taking into account different age groups. We found that the gender gap exists in business start-up intentions and has not narrowed in the twenty-first century in any age group. A clear gender gap was also found in fear of failure in starting a business and perceived skills in entrepreneurship. Finally, the underlying causes of the gender gap in the Finnish context are discussed.

KEYWORDS gender gap, female entrepreneurship, gender segregation, entrepreneurial intentions, entrepreneurial potential, fear of failure, GEM

Introduction

The role of gender in entrepreneurship has been widely explored over the years, revealing that worldwide, women are less likely to start a business or to be self-employed than men (Caliendo et al. 2015; Gicheva & Link 2015; Reynolds 1997; Vossenberg 2013). This widely recognized phenomenon, called the gender gap in entrepreneurship, can be defined as dif-

ferences in entrepreneurial activity between women and men living in the same country, for any given level of economic development (Allen & Langowitz 2013; Elam et al. 2021; Lindgren & Packendorff 2010; Rietveld & Patel 2022; Vossenberg 2013). Although women have been encouraged increasingly to create new businesses through policy measures (Berglund et al. 2018; Serrano-Pascual & Carretero-García 2022), researchers have pointed out that the gender gap has reduced only slowly (Henry et al. 2022; Vracheva & Stoyneva 2020). The underrepresentation of women in entrepreneurship points to a potential to boost economic growth and welfare, as a higher level of entrepreneurial activity among women has a positive impact on economies (Lindgren & Packendorff 2010; Welsh, Kaciak & Thongpapanl 2016; Vossenberg 2013).

To understand the nature and implications of issues related to gender and entrepreneurship, researchers have developed theoretical approaches (Fischer, Reuber & Dyke 1993). Liberal feminist theory, among the most common approaches on female entrepreneurship in leading entrepreneurship journals (Ahl & Marlow 2012; Dean et al. 2017: 27; Fischer, Reuber & Dyke 1993; McAdam 2013), considers women and men essentially similar whereby women will act in the same way as men when they have access to the same opportunities (Dean et al. 2017; McAdam 2013). Liberal feminist theory assumes that the more egalitarian a society is, the smaller the gender gap in entrepreneurship (McAdam 2013; Vracheva & Stoyneva 2020). However, empirical research evidence for the validity of this assumption is controversial (Brush et al. 2019; Baughn, Chua & Neupert 2006; Cheraghi, Adsbøll Wickstrøm & Klyver 2019; Klyver, Nielsen & Evald 2013; Sarfaraz, Faghih & Asadi Majd 2014; Vracheva & Stoyneva 2020).

Based on various global gender equality rankings, Finland and other Nordic countries can be portrayed as the model countries for gender equality. Finland was the first country in the world to grant women full political rights as early as 1906. In 2022, almost 50% of members of parliament were women, as were 12 of the 19 ministers in government. The perception of Finland as a forerunner in gender equality has received support in numerous evaluations. Recently, the Global Gender Gap Report 2022 ranked Finland second-best worldwide (World Economic Forum 2022). In 2021, the United Nation's Gender Inequality Index ranked Finland sixth (of 170 countries) for gender equality (United Nations Development Programme 2021). In the Female Opportunity Index 2021, Finland was ranked second in female opportunities among 100 countries, and in the Mothers' Index, the wellbeing of mothers and children in Finland is rated second highest in the world, among 179 countries (Save the Children 2015). When evaluating girls' opportunities to control their own lives and fulfill their potential, Finland is the second-best country in the world in which to be a girl (Save the Children 2016). In recent years, Finland has ranked among the top European countries in the European Gender Equality Index, indicating that societies that have universal social services and public care have enabled nearly equal participation of women and men in both the public and the private sphere (European Institute for Gender Equality 2022; European Institute for Gender Equality 2023).

It seems, then, that Finland is a fairly equal society in global comparisons. Finland offers a supportive environment for entrepreneurship including low levels of administrative burden for start-ups and easy access to debt financing for new and small firms (OECD/European Commission 2021). It has also a relatively long history of including

female entrepreneurship in national-level strategies and entrepreneurship programs (Heinonen & Hytti 2016). To improve female entrepreneurship, it has experimented with many kinds of gender-specific efforts on business services and education (Kyrö & Hyrsky 2008). In Finland, women start a significantly fewer necessity-based businesses compared to the EU average, while men launch their businesses due to a lack of other opportunities in the labour market more often than men do in the EU average (OECD/European Commission 2021).

However, when looking at the gender balance in entrepreneurship, there seems to be room for development (Lindgren & Packendorff 2010; OECD/European Commission 2021). Statistics show that in Finland most entrepreneurs are men, with only a third of entrepreneurs being female. It is notable that only 20% of employer entrepreneurs are women, while about 40% of sole proprietors are women. Among workers aged 20–64 years, the gender proportion is relatively equal: the workforce comprises 48% of women and 52% of men; the whole population of this age consists of 49% of women and 51% of men (Statistics Finland 2022). According to the Women in Entrepreneurship score, which evaluates the share of women in entrepreneurial positions, as well as how supportive and accessible the country's entrepreneurial environment is for women, Finland lags the top countries in the world, ranking 16 out of 100 countries (Female Opportunity Index 2021).

While prior research and data from various statistical sources are relevant to the question of the gender gap in entrepreneurial activity, large gaps remain in our knowledge, and a more detailed examination of the situation is needed (Sánchez-Escobedo et al. 2016). In this study, we focused on the gender gap in entrepreneurial potential, that is, differences between men and women concerning the likelihood or "potential" of becoming an entrepreneur (Mueller 2004). Scholars have reported a variety of factors for the formation of business intentions (Dawson & Henley 2015). In the entrepreneurship literature, fear of failure is typically considered a barrier, a feeling about the outcomes of a new business that affects an individual's decision of the value and probability of starting a business (Arafat & Saleem 2017; Cacciotti & Hayton 2014; Li 2011; Wagner 2007). Moreover, people's behaviour is substantially influenced by their confidence in their skills and abilities (Ajzen 1991). Therefore, the decision to start a business depends on perceived confidence about one's skills, knowledge, and ability to succeed in entrepreneurial behaviour (Arafat & Saleem 2017; Shapero & Sokol 1982; Liao et al. 2023). However, more research is needed on the extent to which perceived entrepreneurial abilities are gender-equal and how this relates to start-up business (Brush et al. 2017).

The link between gender equality and the entrepreneurship gender gap is still unclear (Rietveld & Patel 2022; Vracheva & Stoyneva 2020). As female entrepreneurship in each country has its characteristics, it needs to be studied in its socio-economic context (Sarfaraz, Faghih & Asadi Majd 2014). Moreover, Cheraghi, Adsbøll Wickstrøm and Klyver (2019) stated that there is a lack of understanding of the interplay between age and gender in entrepreneurship, and prior studies have neglected to take into account that women's and men's opportunities and constraints vary by age.

In response to recent calls for research (Brush et al. 2017; Cheraghi, Adsbøll Wickstrøm & Klyver 2019; Sánchez-Escobedo et al. 2016), we used secondary data collected for Global Entrepreneurship Monitor (GEM) from the years 2003, 2009,

2015, and 2021 in order to get closer to this phenomenon in Finland. The study aimed to clarify the gender gap in entrepreneurship potential in Finland during recent decades, taking into account different age groups. Based on the described research gap, the study addresses the following research questions:

RQ1: Are gender differences present in the expectation of starting a business within the next three years?
RQ2: Are there gender differences in not starting a business for fear it might fail?
RQ3: Are there gender differences in the perception of having the knowledge, skill, and experience required to start a new business?

Theoretical Background

Entrepreneurial activity is widely recognized as a key factor in the success of our society, resulting in economic growth, wealth, higher income, social stability, job creation, innovative and technological development, and new market dynamics (Decker et al. 2014; Gupta et al. 2020, Le et al. 2023, White & Reynolds 1996). Entrepreneurship can be a pathway for women to gain economic independence followed by strengthened social status and a source of inspiration to other women to trust their own abilities (Chhabra & Karmarkar 2016). However, an individual's intention to start a business is influenced by perceptions of the advantages and disadvantages regarding it (Douglas & Shepherd 2000). At the individual level, entrepreneurship is a trade-off, but as this study is focused on the population level, we have taken entrepreneurship as a positive phenomenon for society and societal well-being (see e.g. Brush et al. 2017).

Liberal Feminist Assumption. Equality Increases Women's Entrepreneurship

Liberal feminist theory assumes that the more egalitarian a society is, the smaller the gender gap in entrepreneurship (Ahl 2006; Fischer, Reuber & Dyke 1993; Dean et al. 2017; Vracheva & Stoyneva 2020). This perspective suggests that women are disadvantaged relative to men due to discrimination and systemic factors that exclude them from necessary resources such as business education and access to finance and networks (Ahl 2006; Fischer, Reuber & Dyke 1993; Dean et al. 2017). Liberal feminist theory is inspired by liberal political theory, which believes that people can think rationally (Ahl 2006). Liberal feminist approach is also criticized by scholars, as it treats men and women equally, but differently (Calas & Smircich 1996). It has been mainly criticized for accepting current male-created structures (Foss et al. 2019; McAdam 2013). Even though structural barriers are removed, women need to adapt to male norms to achieve on the same terms (Ahl & Marlow 2012). Moreover, the critique concerns overemphasizing equality at the expense of diversity (Enslin 2003).

Some studies have indicated that gender equality is expected to increase the support for female entrepreneurship (Brush et al. 2017; Meunier, Krylova & Ramalho 2017; Vracheva & Stoyneva 2020). According to Brush et al. (2017), in economies where equality exists in wages and top manager positions in technical fields, women are as likely to start businesses as men. Cheraghi, Adsbøll Wickstrøm and Klyver (2019) found higher levels of entrepreneurship participation for both women and men in higher gender equality countries, and Baughn, Chua & Neupert (2006) point-

ed out that gender equality enhances female entrepreneurship. Rietveld and Patel (2022) found that gender equality is associated with both opportunity-driven and necessity-based entrepreneurship and that the gender gap in entrepreneurship becomes smaller when gender equality in a country increases. On the other hand, there is evidence that gender equality itself does not predict the proportion of female entrepreneurs (Baughn, Chua & Neupert 2006), and other studies suggest that female entrepreneurial activity declines with increasing gender equality (Sarfaraz, Faghih & Asadi Majd 2014) and that greater gender equality at a national level is associated with a larger gender gap in self-employment (Klyver, Nielsen & Evald 2013). Kyrö and Hyrsky (2008) see that even though the number of female self-employed in Finland is reasonably high, the problem is that women, as self-employed entrepreneurs, are the group with the lowest level of protection because of the many exceptions and derogations in social welfare legislation that affect the working lives of women entrepreneurs and make their situation unequal. Most of these derogations concern the reconciliation of work and family life (Kyrö & Hyrsky 2008).

Knowledge of how high gender equality is associated with female entrepreneurship is still incoherent, as the phenomenon is complex and tends to depend for example on the socioeconomic level of the country (Cheraghi, Adsbøll Wickstrøm & Klyver 2019; Klyver, Nielsen & Evald 2013; Sarfaraz, Faghih & Asadi Majd 2014; Vracheva & Stoyneva 2020), industry sector (Halabisky 2018), and motive of entrepreneurship (Vossenberg 2013), that is, opportunity-driven versus necessity-based entrepreneurship (Rietveld & Patel 2022). For example, Lotti (2006) observed that the ratio of female to male entrepreneurs tends to be higher in the case of necessity-based entrepreneurship, which constitutes a high proportion of entrepreneurial activity in low-income countries. However, in the high-income country of Finland, necessity-driven motivation is equally common between genders, while opportunity-based motivation "building great wealth" is more common for men (Björk et al. 2022).

Entrepreneurial Intentions, Fear of Failure and Perceived Knowledge, Skill, and Experience

Entrepreneurial intentions are related to attitudes and personal perceptions about the supportiveness of a particular society, business environment, and personal abilities (Entrialgo & Iglesias 2018). Maes, Leroy and Sels (2014) found that gender differences in entrepreneurial intentions are explained by the appreciation of becoming an entrepreneur (attitude) and perceived ease or difficulty in performing entrepreneurial behavior (control beliefs). The gender gap in entrepreneurial intentions is mediated by perceived behavioral control and partially mediated by perceived subjective norms and attitudes toward entrepreneurship. In addition, Yordanova and Tarrazon (2010) have found that gender differences in entrepreneurial intentions are mediated by the perceived social acceptability of entrepreneurship to a normative reference group (subjective norms). According to Nikou et al. (2019), there may be systemic and contextual factors that may inhibit resources, such as education and networks, leading to women having different sets of variables affecting intentions.

Prior research suggests that attitude toward risk differs significantly between genders (Croson & Gneezy 2009; Eckel & Grossman 2003; Koellinger, Minniti & Schade 2013; Wagner 2007). Women are more risk-averse in their choice behaviour (Croson

& Gneezy 2009; Eckel & Grossman 2003) and more reluctant to compete than are men (Croson & Gneezy 2009). Wagner (2007) and Dawson and Henley (2015) found that a large proportion of the gender gap is associated with attitude to risk and fear of failure. Men's more positive attitude towards risk explains why intentions to start a business are significantly higher among men than among women (Dawson & Henley 2015).

Cognitive perceptions of one's skills and abilities influence the decision to become an entrepreneur (Brush et al. 2017). The more a person believes that she/he is capable of successfully running a business, the more likely she/he is to consider entrepreneurship as a relevant career path (Brush et al. 2017; Chen, Greene & Crick 1998). Thébaud (2010) found, using GEM data from the U.S., that women perceived themselves as less able entrepreneurs compared to men, and their competence standards were stricter. Also, Maes, Leroy and Sels (2014) found that women attribute more importance to having adequate knowledge and capabilities compared to men. There is research evidence that the low rate of women entrepreneurs is associated with little confidence in their skills (Dawson & Henley 2015). Thébaud (2010) even concluded that the gender gap in perceived skills accounts for a significant portion of entrepreneurship's gender gap.

One of the key contributions of this study is the examination of different age groups of women and men concerning entrepreneurial intentions, fear of failure as a barrier to starting a business, and perceived skills and abilities. Yordanova and Tarrazon (2010) found the gender gap in entrepreneurial intentions in a sample of university students. Data from Global University Entrepreneurial Spirit Students' Survey (GUESSS) on university student entrepreneurship shows that there is a gender gap in active entrepreneurs globally, in Finland 3.5% more men than women (N in Finland 1,094 responses and globally over 260,000) (Sieger et al. 2021). However, previous research on the entrepreneurial intentions of young adults is inconclusive. On the one hand, there are arguments that young people do not yet have sufficient work experience or entrepreneurial ability, while on the other hand, it is argued that young people have more innovative and technological skills and flexibility, which positively influences their entrepreneurial intentions (Ferri et al. 2018). In prior research, the impact of growing age has been found to have a negative impact on a person's entrepreneurial intentions (Aydin et al. 2024; Hatak, Harms & Fink 2015). Especially, Wagner (2007) showed that age impacts more women's than men's behavior. They found that increasing age up to 40 years increased women's self-employment start and decreased after that. Hatak, Harms and Fink (2015) explained the lower entrepreneurial intention with higher job identity, which may also grow with age. In general, with the aging population, it is becoming more important to study and understand the impact of age on entrepreneurship (Aydin et al. 2024; Kautonen, Luoto & Tornikoski 2010; Kyrö & Hyrsky 2008).

Data and Method

The research strategy of this study was a survey. It is a popular strategy as it allows the collection of a large amount of data from a sizeable population in an economical way (Saunders, Lewis & Thornhill 2009). Surveys are often conducted using a questionnaire administered to a sample; the data are standardized, enabling easy comparison (Saunders, Lewis & Thornhill 2009).

As Welsh, Kaciak & Thongpapanl (2016) pointed out, country-level literature regard-

ing female entrepreneurship often uses GEM data. GEM defines entrepreneurship as: "Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (GEM Consortium 2024). Utilizing GEM data to study the gender gap in entrepreneurship, we followed the example of studies by Vracheva and Stoyneva (2020), Sarfaraz, Faghih and Asadi Majd (2014), Baughn, Chua and Neupert (2006), Cheraghi, Adsbøll Wickstrøm and Klyver (2019), Klyver, Nielsen and Evald (2013), and Rietveld and Patel (2022). We used the latest available individual-level Finnish GEM Adult Population Survey data from the year 2021. We also studied earlier years to find out if there were changes in the men's and women's entrepreneurship potential, which has been an understudied theme in Finnish entrepreneurship research. Finland previously participated in GEM six years earlier, in 2015. We also added two earlier years to the analysis, 2009 and 2003, with the same six-year interval, using the existing Finnish GEM survey data wall-to-wall. The data are available for research use from the GEM Consortium and the GEM Finland team. The sample sizes in the Finnish GEM Adult Population Survey are 1,983 (2021), 2,007 (2015), 2,004 (2009), and 1,460 (2003).[1]

From these GEM surveys, we were able to gather valuable data which allow powerful insight into changes in the gender gap in entrepreneurial potential over a period of wide-ranging change. The most important strength of longitudinal research is the ability to study change and development (Saunders, Lewis & Thornhill 2009). The GEM population surveys embrace individuals aged 18–64 years for demographically representative portions of the population, who are asked a variety of questions regarding their engagement with and attitude towards entrepreneurship. We chose the above three research questions (RQs) to measure entrepreneurship potential.

The answers to the three questions were split by gender (male/female) and by the five age groups provided by GEM (18–24, 25–34, 35–44, 45–54, and 55–64 years). We compared for each year men's and women's answers in the total sample and in each age group. Answers were analysed using a yes/no scale.[2] Missing answers were removed before the comparison; thus, for each year we report a different number of answers for each question. The chi-squared test of homogeneity was used to find out if there was difference between the genders. The null hypothesis (H0) was that there was no difference between the genders, but if there was less than a 5% probability of H0 (a p-value smaller than .05), H0 was rejected, and we concluded there was a statistically significant difference between genders. We also present a contingency table in percentages for each year overall and for each age group to visualize the differences. The yearly change is investigated visually.

Finally, we subsetted the responders and studied only those who answered yes to RQ1 (i.e. expecting to start a business within three years). We compared the genders in the two other RQs. Age groups were not used in order to keep the count of responses at an adequate level for statistical analysis. This analysis was conducted only for the latest available year, 2021.

Findings

Gender and Age Differences in Expecting to Start a Business Within Three Years

The first RQ studied start-up intention. Men had more start-up intentions than wom-

en in each year included in the analysis when the whole population was analysed (Table 1 and Fig. 1). There was large yearly variation, with 2009 having the lowest and 2015 the highest total percentages of start-up intention. When analysing start-up intention by age group, it was notable that in a majority of the cases, with only two exceptions (2021, age group 35–44 and 2009, 45–54), men reported more start-up intentions than women. However, the difference was not statistically significant in every case.

In each year in the youngest age group, men reported having more start-up intentions than women, the difference was significant each year with sufficient group size (2009, 2015 and 2021). In the second age group, 25 to 34 years, there is statistically significant difference in the first three years (2003, 2009 and 2015) but not in 2021. The middle age group, 35 to 44 years, has statistically significant gender difference in only one year, 2015. The age group 45 to 54 years had significant difference in the two latest years, 2015 and 2021. In each year, the oldest age group had the lowest start-up intention in both men and women.

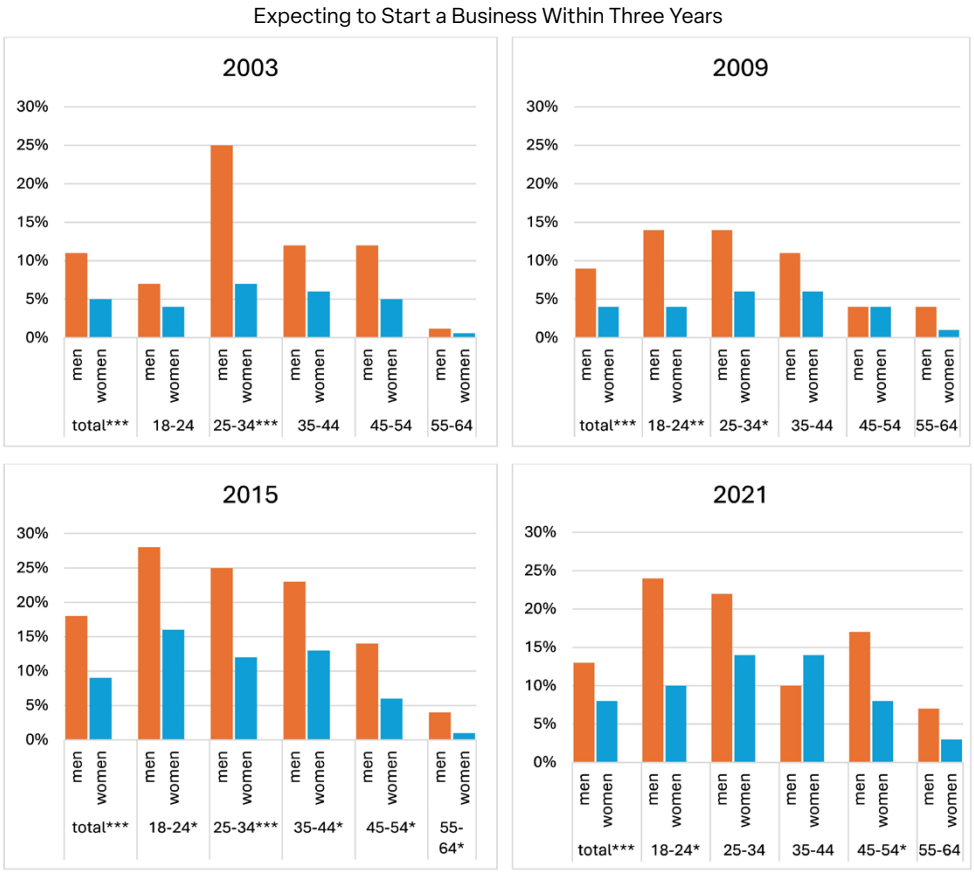

Fig. 1. Expecting to start up a business within three years according to gender (total and by age group). The graphs show positive answer percentages of men and women in total and in each age group for four years: 2003, 2009, 2015, and 2021 in Finland according to GEM surveys.

Table 1. Expecting to start up a business within three years. Each year's sample size and p-values in chi-squared test of gender difference in the whole sample and in each age group are presented. H0 hypothesis: no gender difference; H1 hypothesis: gender difference exists. H0 is rejected when p-value is smaller than .05; in these cells, the difference between men and women is significant. Rejected H0 hypothesis is marked with one asterisk (*) when p-value is less than .05, two asterisks (**) when p-value is less than .01, and three asterisks (***) when p-value is less than .005. Missing values are due to too small a group size for testing (less than five positive answers) and are marked with a hyphen (-).

Year	N	*p*-value total	*p*-value group 18–24	*p*-value group 25–34	*p*-value group 35–44	*p*-value group 45–54	*p*-value group 55–64
2003	1,401	<.001***	-	<.001***	.056	.056	-
2009	1,843	<.001***	.009**	.0192*	.123	.992	-
2015	1,834	<.001***	.030*	.002***	.016*	.011*	.041*
2021	1,629	.002***	.044*	.119	.433	.019*	.079

The analysis was also executed in timeline form (Fig. 2). In the first decade of the millennium, expectations to start a company were lower in both total women (5% and 4%) and total men (11% and 9%), but expectations rose considerably in 2015 among both men (18%) and women (9%). In 2015, the youngest age group reached the highest percentages in men (24%) and women (14%). The year 2021, however, exhibited a declining trend overall and in the youngest age groups, in both men and women. However, the oldest age groups' start-up intentions increased slightly in 2021 compared to 2015.

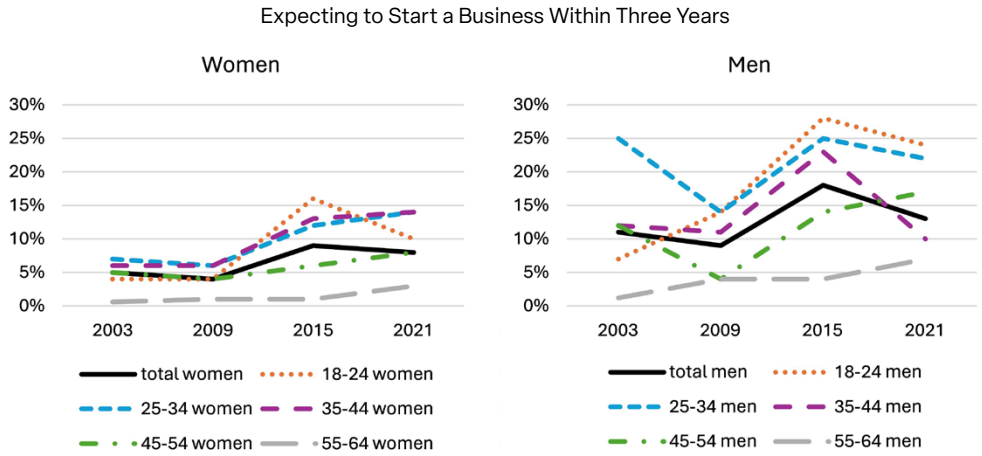

Fig. 2. Temporal change in women's and men's expectations to start up a business within three years overall and by age.

Gender and Age Differences in Not Starting a Business for Fear It Might Fail

RQ2 studied the fear of failure in starting a business. In each studied year, women had a higher percentage of reported fear (37–57%) compared to men (24–38%) in analysis covering the whole population (Table 2 and Fig. 2). In the first three years studied, the difference between genders was statistically significant in two groups in 2003 (25–34 and 45–54 years), two groups in 2009 (18–24 and 55–64 years), and three groups in 2015 (18–24, 35–44 and 55–64 years). In 2021, the gender gap was measured with

high statistical significance in each age group. In 2021, fear of failure was the highest among women in the four youngest age groups, while men's fear differed less based on age.

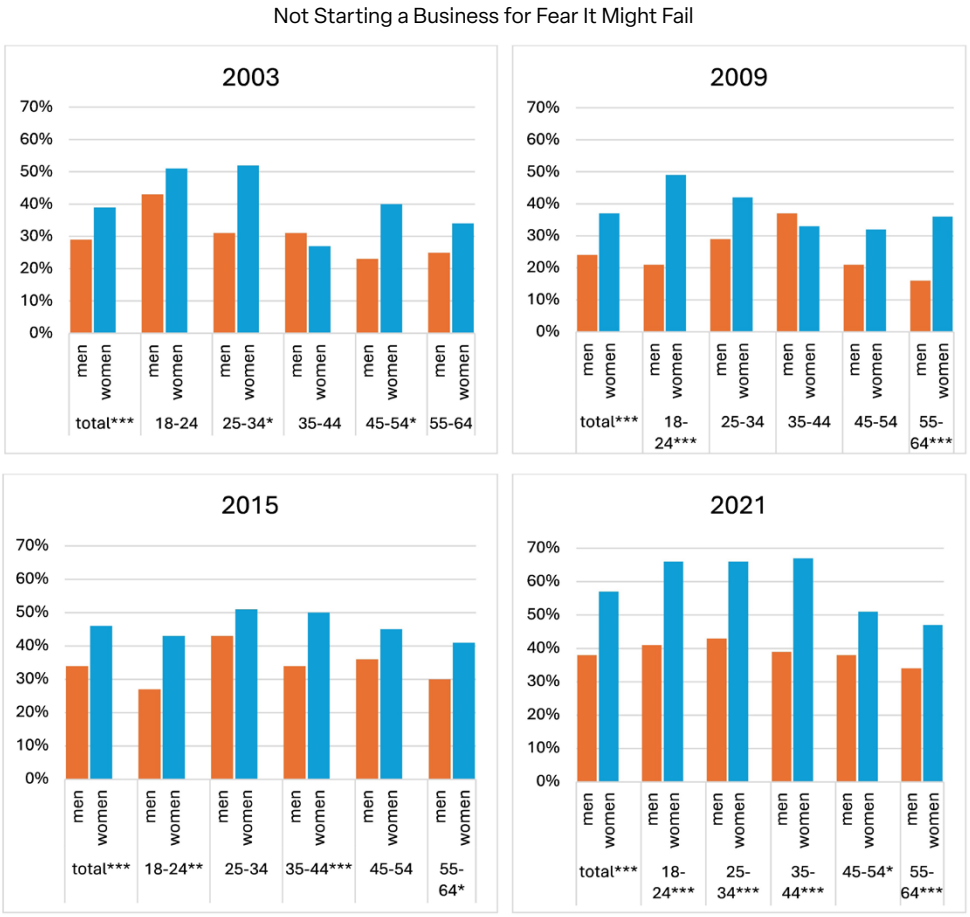

Fig. 3. Not starting a business for fear it might fail by gender (total and divided by age group). The graphs show the positive answer percentages of men and women in total and in each age group in four years: 2003, 2009, 2015, and 2021 in Finland according to GEM surveys.

Table 2. Not starting a business for fear it might fail. Each year's sample size and the p-values of chi-squared test of gender difference in the whole sample and in each age group are presented. H0 hypothesis: no gender difference; H1 hypothesis: gender difference exists. H0 is rejected when p-value is smaller than .05; in these cells, the difference between men and women is significant. Rejected H0 hypotheses are marked with one asterisk (*) when p-value is less than .05, two asterisks (**) when p-value is less than .01, and three asterisks (***) when p-value is less than .005.

Year	N	*p*-value total	*p*-value group 18–24	*p*-value group 25–34	*p*-value group 35–44	*p*-value group 45–54	*p*-value group 55–64
2003	852	.003***	.560	.017*	.682	.027*	.193
2009	975	<.001***	.002***	.081	.629	.086	.001***
2015	2,007	<.001***	.007**	.085	.002***	.062	.014*
2021	1,983	<.001***	.001***	<.001***	<.001***	.012*	.001***

Fear of failure preventing business start-ups grew in the study period in both women and men. Overall, the fear of failure was lowest in 2009. It then increased, peaking in 2021. The first two years displayed lower percentages for men and women (2003: men 29%, women 39%; 2009: men 24%, women 37%), while 2015, and especially 2021, showed higher percentages (2015: men 34%, women 46%; 2021: men 38%, women 57%) (Fig. 4).

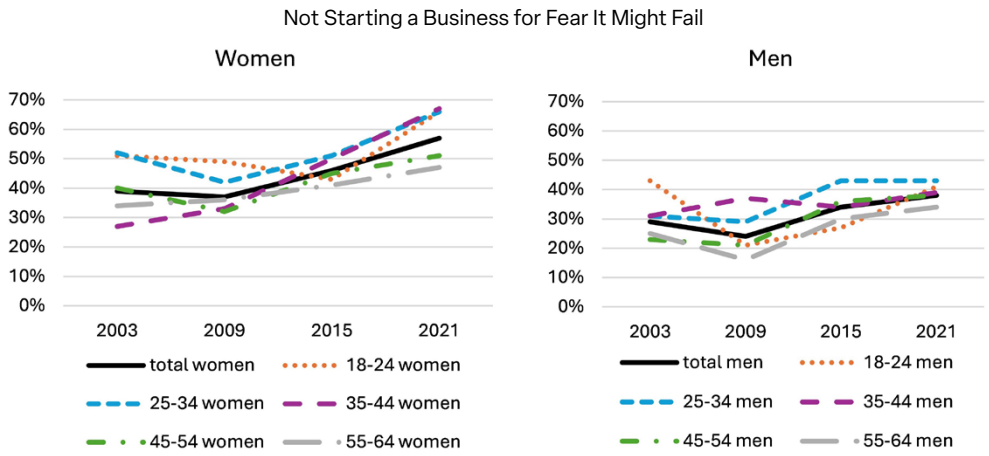

Fig. 4. Temporal change in women's and men's fear of failure preventing a business start-up, overall and by age.

We also created a subset of the 2021 sample including only those respondents who intended to start a business within three years. From this subset of 197 respondents, 63 women and 116 men, 41% of women and 25% of men reported having a fear of failure. Even though the sample is relatively small, the gender gap had high statistical significance ($p = .037$). From the other part of the sample ($n = 1{,}450$), respondents without start-up intentions, 57% of women and 40% of men reported being afraid of failure, and the gender gap was again significant ($p < .001$). Those with start-up intentions reported less fear of failure, but the percentage of fear was still notably high, especially among women. Also, if a person answered positively to both questions expecting to start a business within three years and at the same time reporting fear of failure preventing a business start-up, they seem to be in an uncertain situation.

Gender and Age Differences in the Perception of Having the Knowledge, Skill, and Experience Required to Start a New Business

The perceived knowledge, skill, and experience to start a new business was greater among men than women every year in this study, and the difference was significant in every year. In each year, close to 30% of women thought they had the required know-how, while men's percentages were always higher and varied more, between 43% (in 2009) and 69% (in 2003). Gender difference within age groups was not always significant, but in most of the cases men expressed more positive perceptions of their own knowledge, skill, and experience. Generally, the know-how trend grew with age in both men and women (Table 3 and Fig. 3).

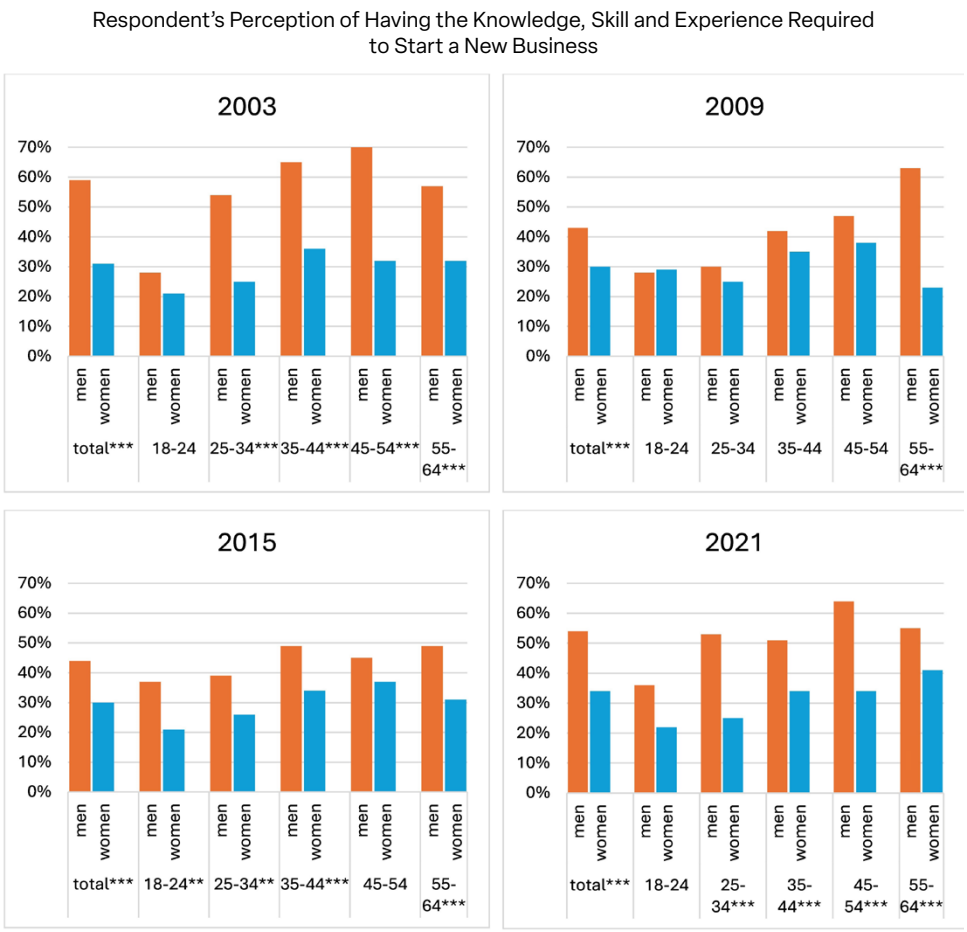

Fig. 5. Respondent's perception of having the knowledge, skill and experience required to start a new business by gender (total and by age group). The graphs show the positive answer percentages of men and women overall and by age in four years: 2003, 2009, 2015, and 2021 in Finland according to GEM surveys.

Table 3. Respondent views of having the knowledge, skill and experience required to start a new business. Each year's sample size and p-values of chi-squared test of the gender difference in the whole sample and in each age group are presented. H0 hypothesis: no gender difference; H1 hypothesis: gender difference exists. H0 is rejected when p-value is smaller than .05; in these cells, the difference between men and women is significant. Rejected H0 hypotheses are marked with one asterisk (*) when p-value is smaller than .05, two asterisks (**) when p-value is less than .01, and three asterisks (***) when p-value is less than .005.

Year	N	p-value total	p-value group 18–24	p-value group 25–34	p-value group 35–44	p-value group 45–54	p-value group 55–64
2003	873	<.001***	.631	<.001***	<.001***	<.001***	<.001***
2009	985	<.001***	1	.520	.428	.213	<.001***
2015	1,973	<.001***	.006**	.006**	.003***	.088	<.001***
2021	1,833	<.001***	.090	<.001***	.002***	<.001***	<.001***

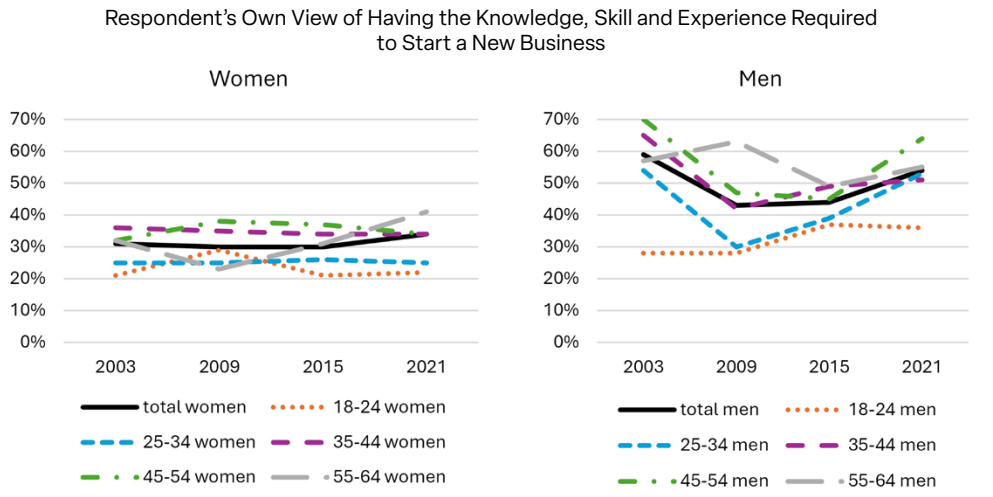

Fig. 6. Respondents' own view of having the knowledge, skill and experience required to start a new business by gender (overall and by age group). The graphs show the positive answer percentages of men and women overall and in each age group in four years: 2003, 2009, 2015, and 2021 in Finland according to GEM surveys.

Temporal patterns for women and men exhibited many differences. Women's perceived knowledge, skill and experience required to start a new business remained generally at the same level. At the same time, the men's total was lowest in 2009 and 2015, but different age groups' answers did not follow the same pattern.

The subset in 2021 who reported having the intention to start a business shows a significant gender gap ($p = .008$); 75% of men and 54% of women thought they had the required knowledge, skill, and experience. The total number of responses was 167 (106 men and 61 women). Responders who did not have start-up intentions ($n = 1{,}344$) quite often thought they lacked knowledge, skill, and experience (49% of men and 30% of women); again, the gap was significant ($p < .001$). According to this result, almost half of women with start-up intentions did not think they had the needed skill, knowledge, and experience.

Discussion

In this study, we aimed to clarify the gender gap in entrepreneurship potential in Finland during recent decades, taking into account different age groups. In this pursuit, we addressed three research questions that focused on respondents' views about their intention to start a business, fear of failure as a reason for not starting a business, and their own perceptions of having the knowledge, skill and experience required to start a business.

Gender and Age Differences in Start-Up Intentions

Intentions are the best predictor of any planned behaviour, including entrepreneurship (Krueger Jr, Reilly & Carsrud 2000: 412). RQ1 investigated business start-up intentions within three years. In each investigated year, the difference between men and women in the total sample was significant: men had more start-up intentions than women. However, in the latest year (2021), in one age group (34–45-year-olds), a

higher percentage of women than men reported start-up intention, but the difference was not significant. Overall, the trend lines of women and men share the same form: start-up intentions bottomed in 2009, peaked in 2015, and went slightly downward in 2021. There is a temporal connection to the cyclical fluctuations of the global economy: the financial crisis in 2007–2009 (see Acharya et al. 2009), a growing economy after the crisis, and a new economic decline caused by the COVID-19 pandemic starting in late 2019. The pandemic lockdown hit the women-dominated service sector hardest; also, the increased home-care responsibilities impacted women more than men (Kabeer, Razavi & van der Meulen Rodgers 2021). The increase in start-up intentions among the youngest age group is positive news for the future, but the pandemic year 2021 also seems to have hit the youngest groups' optimism the hardest. In general, the results reinforce the findings of Cheraghi, Adsbøll Wickstrøm and Klyver (2019), who observed that the gender gap in entrepreneurship participation is stronger among young adults than in older age groups.

Possible Explanations for Differences in Start-Up Intentions. Differences in Fear of Failure and Perceived Skills

Based on the results for RQ2, fear of failure preventing a business start-up exhibited a significant gender gap in every studied year in the whole population. Fear of failure was lowest in 2009 but subsequently increased, peaking in 2021, with all age groups following the same pattern. This might be an impact of the question's negative formation: "I would not start a business because of the fear it would fail." Also, within the population with start-up intentions, the gender gap between women and men regarding fear of failure was significant. These findings are in line with the studies by Dawson and Henley (2015), Koellinger, Minniti and Schade (2013), and Wagner (2007), who found that women exhibit higher fear of failure than men towards entrepreneurship.

As the results for RQ3 revealed, the perceived knowledge, skill, and experience to start a new business showed a significant gender gap in each year. In most age groups, men had a more positive perception of their own capabilities than women. In both men and women, the know-how mostly grew with age. Women's perceived knowledge, skill, and experience mostly remained at the same level throughout the study period. At the same time, men's overall perceptions were lowest in 2009 and 2015. However, especially the men's age groups followed different patterns; the confidence in own know-how did not grow in the youngest age group as it did in the older groups. The group having start-up intentions again displayed a significant gender gap in perceived know-how. Almost half the women with start-up intentions did not think they had the needed skills, knowledge, and experience. Part of the contradiction of having start-up intentions but not having skills may be because the item on start-up intention had a three-year window, which allows time to learn.

Our findings are in line with previous studies according to which females are more concerned and less self-confident about entrepreneurship (Dabic et al. 2012; Halabisky 2018) and their entrepreneurial skills (Koellinger, Minniti & Schade 2013). Women are less likely than their male counterparts to believe they have the skills and abilities to start a business (Thébaud 2015). They are more risk-averse (Piacentini 2013) and, at the European Union level, women (52%) are more likely than men

(42%) to report that fear of failure prevents them from starting a business (Halabisky 2018). Koellinger, Minniti and Schade (2013) revealed that females are less confident in their entrepreneurial skills and have a higher fear of failure, in addition to different social networks, which explains a substantial part of the gender gap in entrepreneurial activity. Maes, Leroy and Sels (2014) found that women display lower internal feelings of control than men, and the perceived lack of internal control may be due to the idea that entrepreneurial skills are male-stereotyped, which makes women feel less confident.

Why Do Gender Equality and the Gender Gap in Entrepreneurship Potential Exist Together?

As the aim of this study was to clarify the gender gap in entrepreneurship potential in Finland during recent decades taking into account different age groups, we can say that a gender gap exists. The findings indicate that liberal feminist theory's underlying assumption about the connection between an equal society and balanced gender entrepreneurial activity does not hold in the studied Finnish context. However, it must be taken into account that although Finland is one of the most equal countries in the world by international comparisons, it is not completely equal and may have gendered structural barriers (Muntean & Ozkazanc-Pan 2015) and systemic factors (Nikou et al. 2019) that maintain the gender gap. A possible explanation is offered by Klyver, Nielsen and Evald (2013), who stated that in highly egalitarian countries, policy focus is on women's employment rights in the labour market, leading unintentionally to a preferential situation whereby women's employment options may be favoured over entrepreneurship. Then, women enjoy equal opportunities with men, such as benefits from good quality employment, and have more access to social services that may discourage them from taking the risk of starting their own business given the associated lack of welfare and holidays, market uncertainty, and lower incomes (Marlow & Martinez Dy 2018; Sarfaraz, Faghih & Asadi Majd 2014). According to Thébaud (2011), generous public funding for childcare is associated with larger gender gaps in the odds of being an entrepreneur. Moreover, larger companies and public employers typically offer healthcare and support for working mothers, which may reduce women's incentives for starting a business. However, it must be noted that the low rate of female entrepreneurship does not imply a low rate of female contribution to the economy (Sarfaraz, Faghih & Asadi Majd 2014). Furthermore, Halabisky (2018: 5) pointed out that it is central to look beyond simple gender ratios of entrepreneurs to the motivations and quality of the businesses, as greater gender equality may improve the quality of businesses and business creation based on opportunity while reducing poorer quality business creation based on lack of choice.

Moreover, a closer look reveals that Nordic welfare societies—despite their extensive gender equality—have a deep gender-based division that appears both in education and in the labour market, both horizontally and vertically. The phenomenon is known as the gender paradox (Griffin & Vehviläinen 2021). When girls and women are given opportunities to choose differently, they still tend to choose traditionally female occupations. Simultaneously, paid and unpaid care work in public services and at home is for the most part taken care of by women. Deep gender segregation—both horizontal and vertical—is the most prevailing and persisting challenge for full

equality and seems to be surprisingly difficult to overcome due to existing structures and stiff cultural gender binaries efficiently maintained in our everyday lives as well as through the media (e.g. Rossi 2003; Rossi 2011).

Ahl (2006) stated that research on women entrepreneurs has suffered from numerous deficiencies, such as a lack of theoretical bases, a one-sided empirical focus, the discounting of structural, historical, and cultural factors (see Chell & Baines 1998), the use of male-gendered measuring instruments, and the absence of a power perspective and explicit feminist analysis. In addition, Calas, Smircich and Bourne (2009) questioned the economic premises of entrepreneurship research and called for new and alternative frameworks. Calas, Smircich and Bourne (2009) and Vossenberg (2013) argued that the gender gap in entrepreneurship will remain if the male-dominant forces and patriarchal society that shape the context of entrepreneurship are left unquestioned. Feminists argue that research should take into account the power structures that set structural barriers to women's entrepreneurship, or else it will ignore possible solutions, results, and efforts to close the gender gap (Vossenberg 2013: 11). Change will only happen when entrepreneurship is reframed through feminist analytical lenses enabling the potential of entrepreneurship for positive social change (Calas, Smircich & Bourne 2009).

The question is how to change the business environment and social institutions to support and encourage women with start-up intentions in Finland and other egalitarian countries that have this challenge? Entrepreneurship is not an isolated island; it is the process between people and context (Aaltio-Marjosola, Kyrö & Sundin 2008), encountering gender imbalance but seeking a balance and an overall gender-equal settlement. Understanding the gender gap in entrepreneurship requires a focus on institutional (Klyver, Nielsen & Evald 2013) and structural barriers women entrepreneurs face (Muntean & Ozkazanc-Pan 2015). According to Piacentini (2013), stereotypes (e.g. the belief that being an entrepreneur is a man's job) and lower exposure of women to female role models explain women's lower entrepreneurial activity and why women often believe they are not capable of becoming successful entrepreneurs. Women tend to perceive themselves and the entrepreneurial environment in a less favorable light than men (Langowitz & Minniti 2007). Ahl (2006) posited that "entrepreneur" is a masculine concept. Thébaud (2015) argued that gendered perceptions, driven by individual dispositions and shared cultural beliefs that link entrepreneurship to men and stereotypically masculine traits, lead to this gender gap. Moreover, Hechavarría et al. (2018) pointed out that gendered linguistic structures reinforce gender stereotypes and discourage women's entry into entrepreneurship.

Entrepreneurship education is identified as having a great effect on women's self-efficacy and overcoming fear of failure, and, through this, on entrepreneurial intention (Guelich 2022; Wilson, Kickul & Marlino 2007). In Finland, various interventions have already been developed to bring more visibility to entrepreneurship at different levels of education—starting from compulsory education, when all 12-year-olds do an excursion to Yrityskylä,[3] up to tertiary-level minor studies on entrepreneurship that are available to all students at the university. Dabic et al. (2012) found that among academic female students, establishing entrepreneurial mentoring and an appropriate tutoring structure are the most needed entrepreneurial educational activities. However, larger, macro-level gendered structures and socio-cultural prac-

tices should be addressed in entrepreneur education and to take into account policies shaping entrepreneurship. Considering the growth in female participation in entrepreneurship in the United States, despite its significant gender gap (Piacentini 2013), identified change factors have included a lessening of sex stereotypes, more women studying business, engineering and science, and more opportunities for women to gain experience in varied occupational areas (Baughn, Chua & Neupert 2006: 692). If carried out successfully, gender mainstreaming in entrepreneurial activities could result in increased diversity among entrepreneurs as well as in businesses, and consequently, their available services.

Limitations of Research and Possible Future Directions

Randomized GEM Adult Population Survey data with time series provide temporally comparable variables for analysing entrepreneurship-related activities by gender and also monitoring temporal change with high statistical significance. The data contain randomized selections of respondents for each moment of time, which enables trend analysis in the population, but not long-term analysis of each individual's perception change, as in a cohort type of follow-up data. Even though the data and specific questions are from relatively large samples (minimum n = 852 for 2003 and maximum n = 2,007 for 2015), the data do not allow measuring entrepreneurship dynamics by using multiple background variables in clustering groups (e.g. by gender, age, and regional grouping) simultaneously.

To deepen this analysis in the future, national register data of entrepreneurs, education, family status, place of residence, migration history, and previous employment could be applied together with gender data including larger samples of the population as a whole. These types of large register studies would enable more thorough scrutiny of the dynamics of entrepreneurial activities; the findings related to the gender gap in entrepreneurship in the current research indicate a need for more in-depth analyses. Moreover, studying the existence and impact of networks (Brush et al. 2017; Ozkazanc-Pan & Muntean 2018) and role models (Piacentini 2013) could help explain the entrepreneurial gender gap in Finland.

NOTES

[1] 2003 had more age groups than the other studied years; 1,460 is the sample size of respondents between 19 and 64 years of age.

[2] RQ1 was a yes/no question every year, and RQ2 and RQ3 were asked using a five-level Likert-like scale in 2021 but were yes/no in the previous years. Likert answers are coded to binary as 4 and 5 -> yes, 1 and 2 -> no and 3 -> removed.

[3] https://nuortennyt.fi/en/yrityskyla/ (accessed 14 March 2024).

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